423 tary constructions. A family owning one horse must
656 transport 30 cords of timber to fixed stations. The owner of two horses must double the quota, in winter.

[311] In 1947, about 40% of arable land of Lithuania was unplanted, and the diet of the rural population suffered a catastrophic decline. Few tractors are available. Threshing machines were nationalized. Bribes are required to gain any assistance from the Russian managers of the MTS stations—and people prefer not to deal with the drunken and greedy representatives of the "master race." Forests are systematically destroyed and forest fires are not combatted. The MVD-MGB troops quite frequently set fire to the forests in order to "smoke out" guerrillas.

There was even less incentive to work for Russia in 1948. At least one half of the arable land went untilled. . . .

Industry

433 Peat production dropped to one-third of the level
377 of the German occupation period. Very little coal is brought to the country. For these reasons, there is a severe shortage of electric power. City dwellers must provide their own heating—for apartments, institutions and schools.

The official press occasionally reports that certain officials "abuse their office" by driving to some village, demolishing "deserted homes" and forcing the neighboring farmers to transport the lumber to the city as fuel. . . . Due to the prevalent bureaucracy and chaos, government buildings and student dormitories go unheated for weeks. Therefore, dormitory inhabitants or the office force of this or that institution mobilize and follow the example of the dignitaries: they descend on and transport deserted homes (in parts) in a "socialistic competition" to keep themselves warm. . . .

433 Brick production dropped for lack of skilled man-
[339] power. The brick works of Rokai and Palemõnas produce for the army exclusively. No bricks and no tiles are available for sale to private citizens. Therefore, bricks and tiles figure in a lively black market exchange for horses.

Not a single cement plant is in operation—except on paper, in the boastful reports of "achievements" of the Russian dignitaries. The cement plants of Akmenė and Skirsnemunė are still in the stage of paper planning, though included in the five-year plan to be consummatted by 1950.

[288] The textile plants of Klaipėda are idle. The Drobė plant of Kaunas is under reconstruction. The Litex and Audiniai plants began operating. The Linas plant produces for export to Russia exclusively.

The hide tanning plants of Šiauliai and the glass factories of Radviliškis and Aleksotas are operating. Dairies were mostly reactivated. The huge Maistas stockyards and canneries were burned down in Kaunas, and feeble efforts at reconstruction are forging ahead. The Maistas plant in Panevėžys is operating but production is small. The plant at Tauragė still lies in ruins.

The beet sugar refineries of Marijampolė and Panevėžys resumed operations. The paper and cardboard plant produces inferior quality products. The railway yards and repair shops of Kaunas are being expanded. The factories, as a rule, produce for war and export to Russia. The present production level amounts to less than 50% of the 1939 level.

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in 1920, when Japan invaded Manchuria in 1931, and in many other instances in subsequent years, most likely there would have been no breaking of the Versailles Treaty for the purpose of conquest, and, above all, there would be no war today.

GENERAL OUTLINE AND BASIS OF RECONSTRUCTION

As stated before, Lithuania is entirely an agricultural country. During the first twenty-two years of her independence, she focused her attention on the introduction of scientific methods in farming and the development of industries connected with agriculture. She concentrated on the development and production of raw materials in an earnest endeavor to improve her economic status.

The development of world raw-material production from the latter part of the nineteenth century until 1939 may be divided into four periods:

1.—Pre-World War period of normal progress;

2.—The war and post-war period of disturbed development, 1914–22;

3.—Post-war period of progress, beginning with 1923, a seven-year period of progress with moderate fluctuations along lines that followed the same trend as before the war;

4.—Period of disturbed development during the world depression, and of recovery from 1930 until the war of 1939.[2]

1. The pre-war period.—Lithuania then being under the government of Russia, complete economic statistics of that period are not available. On the other hand, the statistical ma-

[2] League of Nations, *Report of the Committee for the Study of the Problem of Raw Materials*, Geneva, 1937, p. 37.

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●433 terial collected by the German professor Skalweit [3] refers to a territory somewhat larger than the Lithuania of 1939. His findings, however, give a fairly accurate picture of the state of agriculture in Lithuania before the World War of 1914–18.

241 The main branches of agriculture in pre-war Lithuania were the cultivation of grain crops, the growing of flax, and the breeding of horses. Dairying, pig breeding, and poultry farming were almost nonexistent.[4]

2. The war and post-war period of disturbed development.—The study of these periods is almost entirely omitted in this volume, as these periods cannot serve for comparison, because almost from the very first days of the war Lithuania was converted into a battlefield for the Russian and German armies. The pursuit of agriculture was impossible throughout most of the period. As late as 1920, when a third of Lithuania was seized by Poland, foreign armies were still trampling the few crops that the farmers were trying to raise. Only after 1920 did Lithuania actually enter upon a comparatively normal economic life.

3 and 4. Post-war periods of progress, depression, and recovery.—Agriculture, the most fundamental economic activity of man, varies from the most primitive cultivation with the hoe to skilled machine-implemented scientific farming. In Lithuania, farming is not mechanized to a great extent, for the use of machinery on small parcels of land is not profitable. Experiments in scientific farming have, however, been undertaken and substantial progress has been
ooo made since the World War. Though wheat is mankind's most

[3] B. Skalweit, *Die Landwirtschaft in den litauischen Gouvernements: ihre Grundlagen und Leistungen* (Agriculture in the Lithuanian Gouvernements: Its Foundation and Efficiency), Jena, 1918.

[4] J. Krikscziunas, *Agriculture in Lithuania*, Kaunas, 1938, p. 12.

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Though wheat is mankind's most popular cereal food, rye is the first choice in Lithuania. Only about 8 percent of all the arable land is utilized for wheat, while 19 percent of the land is devoted to the growing of rye. Another of the world's largest crops—corn (maize)—is not grown in Lithuania. The same is true of rice. The more popular grain crops, besides rye, are oats, barley, and wheat. Most favored of root crops in Lithuania are the potato and various species of root vegetables. The sugar beet, entirely unknown before the World War, is now quite popular and is grown in sufficient quantities to supply three sugar refineries. Of the fibers, flax is the only one that is widely grown. Hemp is also produced, but in small quantities and only for the consumption of farmers themselves, who use the fiber for ropes and the seeds for several kinds of food.

Another important branch of the agriculture of Lithuania is livestock breeding, which has been vastly improved and extended since the World War.

Economic reconstruction after the World War was not as general among agricultural countries as it might at first appear. Timoshenko points out several unfavorable factors.[5] First of all, the prices of agricultural commodities began to decline early in the period of prosperity. This affected the purchasing power of agricultural and raw-material producing countries. Another adverse factor was the reëstablishment of a system of agricultural protection in the industrial countries of Europe. Cereal production was given less tariff protection during the earlier post-war period than before the war. In some countries of central Europe, including Germany, tariff protection of grain products was completely discontinued during the first post-war years.

[5] Vladimir P. Timoshenko, *World Agriculture and Depression*, Michigan Business Studies, Vol. V, No. 5, University of Michigan, 1933, pp. 541–663.

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433 241 439 Since 1924–25 the policy has been changed and the countries of central Europe have returned to the pre-war methods of tariff protection of their cereal production as well as to the protection of their animal husbandry. This has contributed to duplication in production and to the narrowing of the world market for exported agricultural products, while other factors stimulated the further expansion of agricultural production in the surplus-exporting countries. Exports from agricultural and raw-material producing countries increased very little during the years of prosperity because there was no appreciable increase in the demand for these products in the industrial countries. At the same time, the imports of agricultural countries, consisting mainly of manufactured goods, rose rapidly. The payment balance of agricultural countries could be kept in equilibrium only by an increase in indebtedness or by drawing on the surplus of previous years. For example, in 1924 Lithuania's exports exceeded imports by 60 million litas, while in 1927 imports exceeded exports by 19.8 million litas and in 1938 by 34.2 million litas.[6]

000 Data on economic activities in Lithuania cover the period up to 1939. With the war of 1939 another period of "disturbed economic development" started; no attempt can be made to analyze this period in this volume, since economic conditions are very unstable and data on economic activities unavailable.

LAND REFORM

423 One of the factors that contributed most to a complete overhauling of the internal economic and social structure of Lithuania was the land reform, a question which was

[6] Exchange rate: 10 litas to $1.00 until 1933; 6 litas to $1.00, 1935–40.

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extent that these farmers produced various kinds of agricultural products, they usually concentrated more specially on one branch of farming, such as dairying or grain raising. About 100,000 farms belonged to this group.

Farms exceeding 70 acres belonged to the third group and stood highest in independent Lithuania from the point of view of the quality and quantity of their products. There were about 27,000 farms in this group. It was mainly this and the second group which supplied the bulk of agricultural products for export. It was also this third group and to a degree the second which first felt the ruin of Sovietization. Most of the farms in the third group were reduced to not more than 74 acres so that the farming inventory and buildings were not suitable to the smaller parcels of land. A substantial part of them was converted into government farms (*sovkhoz*). At the same time pressure was put on the second group by imposing exorbitant taxes in order to make it disintegrate as rapidly as possible.

Taking into consideration the area of land utilized by each group, it might be deduced that in normal times the first group produced 20 percent of the entire amount sold on the market, while the second and third groups produced the remaining 80 percent, or 40 percent each. From this it would appear that the capacity of agricultural production in Lithuania during the Soviet Russian occupation dropped at least 40 percent.

When the Germans occupied Lithuania in June, 1941, they found the Bolshevik-introduced system convenient to some extent for the expropriation of the country economically. They restored the system of private ownership, but had not returned, up to the end of 1941, farms to the original owners. Even those farmers who were left managers of their small

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Chapter III

INDUSTRY

438 The industry of Lithuania before the World War was gov-
433 erned not by the requirements of the local markets. Its development and structure were more suited to the Russian empire, on whose national economy, politics, and markets Lithuania was dependent. There was extensive development of such industries as leather and metal, which had no basic connections with the markets of ethnographic Lithuania. At the same time, industries closely connected with agriculture were almost nonexistent. There were no slaughterhouses where the livestock surplus could be prepared for export, and there was almost no textile industry; the country's flax had to go to western Europe for manufacture into cloth. Even the timber industry, which was in a very favorable situation, was undeveloped. This same industry was flourishing just across the border, in the port of Klaipeda (Memel) in pre-World War Germany, although it was wholly dependent for its raw materials on Lithuania and the rest of pre-war Russia.[1]

After the World War the remnants of the Russian industries in Lithuania were unsuited to the needs of the newly established republic. And even those remnants were almost completely disabled, because during the hostilities the ma-

[1] C.S.B., 1918–28, pp. 67–90.

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chinery had been destroyed or sent to "unknown destinations." Therefore the industry of the reëstablished republic had not only to be reconstructed but had to be almost entirely reshaped in a manner suited to the needs of an agricultural country. According to the vague pre-World War statistics, there were approximately 3,144 separate industrial units in Lithuania, this number including very small establishments of three to five workers. According to statistics compiled from reports of factory inspectors,[2] the province (gouvernement) of Kaunas had 151 enterprises with 6,603 workers, distributed as in Table 31.

TABLE 31

INDUSTRY OF LITHUANIA IN 1913

NUMBER OF ENTERPRISES	NUMBER OF WORKERS IN EACH
1	1,256
2	600
2	200
2	100–200
12	51–100
7	31–50
13	21–30
34	11–30
78	less than 10

After the World War the leather and metal industries experienced a great setback, while the food, textile, paper, and other industries soon started on the upswing. An idea of the rapid increase in the number of industrial establishments may be gained from the number of government operation certificates issued. In 1920, 2,474 certificates were issued;

[2] Kubilius, *op. cit.*, pp. 222–23.

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438 in 1921, 4,011; in 1922, 4,933; in 1923, 5,402; in 1924, 5,-
433 419; in 1925, 5,941; in 1926, 5,164; in 1927, 5,437; in 1928, 5,742; in 1929, 6,010; in 1930, 5,842; in 1931, 5,796; in 1932, 5,735; in 1933, 5,451; in 1934, 5,710; in 1935, 12,-067; in 1936, 14,750; in 1937, 15,214; in 1938, 15,717; and in 1939, 16,131.[3]

[651] The sudden rise of the number of industrial establishments registered in 1935 and the subsequent years is the result of the extension of the License Tax in that year to even the smallest establishments. The new ruling required that a license be taken out even by concerns with only a single employee. Thus the figures of 1935 and later are not wholly comparable with the previous ones; nevertheless they reflect
[463] the rise of industry in Lithuania. A more detailed picture of the development of industry may be obtained from Table 32, which shows that the largest number, over 20 percent, of wage earners are employed in the textile industry. The food and luxury goods industries, which in 1937 held third position with 5,195 employees, advanced to second place in 1938, with 6,150 workers. The third place in 1938 was held by the timber industry, with 4,852 workers, having enjoyed during the previous year an all-time peak in its record of employment. Fourth place, according to the number of workers employed, belongs to the clay products and stone industry; after it come the metals and machinery industry and the clothing and footwear industry.

When the value of industrial production is taken into consideration we get a very different picture of the situation, with the food and luxury industry in first place, accounting for over 41 percent of the total value of the industrial production of Lithuania. Next follow the textile

[3] C.S.B., 1938 and 1939, p. 186 and p. 194 respectively.

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TABLE 32

CLASSIFICATION OF INDUSTRIAL ESTABLISHMENTS OF LITHUANIA 1927–39[a]

INDUSTRY	1927		1930		1935		1938		1939[b]	
	Establishments	*Employees*	*Establishments*	*Employees*	*Establishments*	*Employees*	*Establishments*	*Employees*	*Establishments*	*Employees*
Peat-cutting	7	603	6	541	7	417	16	1,086	19	1,296
Stone, clay products, etc.	94	1,357	108	1,648	82	1,539	130	3,566	130	3,212
Metals and machinery	97	1,895	94	1,975	92	1,711	120	3,327	97	2,981
Chemicals	49	885	53	792	48	940	48	1,583	53	1,695
Leather and fur	40	657	44	648	37	749	58	1,022	50	865
Textiles	55	1,403	57	2,194	61	4,679	81	7,019	84	4,611[e]
Timber	185	3,446	178	3,096	192	4,238	264	4,852	238	2,864[d]
Paper and printing	52	2,115	64	2,323	71	2,195	84	2,615	81	1,613[e]
Foodstuffs	253	3,786	246	3,616	343	4,284	394	6,150	347	5,925
Clothing and footwear	139	1,607	154	1,891	148	1,952	183	3,056	186	2,841
Electricity and gas works	29	648	26	479	31	512	33	590	31	474

[a] C.S.B., *Statistikos Metrastis*, Vol. 1929–39.
[b] All data in this column after seizure of Klaipeda Territory by Germany in March, 1939.
[c] Before Klaipeda Territory cession: 87 establishments with 7,561 employees.
[d] Before Klaipeda Territory cession: 206 establishments with 4,257 employees.
[e] Before Klaipeda Territory cession: 88 establishments with 2,679 employees.

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438 industry with 14.9 percent, the timber industry—9.1 per-
433 cent, and the paper and printing industry—8.4 percent. These facts may be clearly seen from Table 33, which shows

TABLE 33

AGGREGATE VALUE OF INDUSTRIAL PRODUCTION OF LITHUANIA 1937–39

(*In Thousands of Litas*)

INDUSTRY	1937	1938	1939
Peat-cutting	1,277	1,873	2,932
Stone, clay products, etc.	7,012	9,097	9,389
Metals and machinery	19,298	24,661	23,378
Chemicals	13,939	16,529	20,734
Leather and fur	17,245	16,684	14,306
Textiles	35,656	40,331	40,331
Timber	15,847	16,865	14,341
Paper and printing	17,807	17,543	17,630
Food and luxury goods	151,569	175,470	223,424
Clothing and footwear	20,762	23,658	26,696
Electrical works	10,672	11,738	12,588
TOTAL	311,084	354,449	405,749

that the value of total production in 1939 was 405,749,000 litas against 354,449,000 litas in 1938 and 311,084,000 litas in 1937.

The growth of the industrial production of Lithuania was not even impaired by the world depression of 1929. While world production in 1931 and 1932 had fallen to the lowest ebb, production in Lithuania showed further expansion. Several reasons may be given in explanation of this phenomenon.

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651 First, Lithuania exercises a specific customs duties system, which is an advantage to home industry during a period of

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TABLE 34

INDUSTRIAL PRODUCTION INDEX OF LITHUANIA AND THE WORLD 1929–39

YEAR	PRODUCTION OF LITHUANIA [a]	WORLD PRODUCTION [b]
1929	100	100
1930	108.3	88.3
1931	140.7	74.8
1932	153.7	63.0
1933	([d])	71.3
1934	166.5	77.0
1935	185.9	85.4
1936	244.2	95.5
1937	272.0	102.5
1938	309.4	125.8 [c]
1939	354.2	128.7

[a] *Report*, p. 20.
[b] League of Nations, *Monthly Bulletin of Statistics*, Geneva, June, 1938.
[c] *Ibid.*, *Statistical Year-Book 1939–40.*
[d] Figure not available.

falling prices in the world market, especially when the duties are high as compared with the prices of commodities. Customs duties do not fall in proportion to the fall of prices in the world market, as would be the case under the ad valorem duties system. Thus, home industry benefited from the fall of raw-material prices and was able to supply the home market with cheaper commodities than could be offered by the foreign producers for whose products the customs duties were not lowered to suit the decreased prices. This is proved even by the great decrease in the value of imports, which in 1935 amounted to only 128,597,000 litas, as against 142,176,200 litas in 1933 and 312,415,200 in 1930.

Second, it is to be noted that the index of industrial pro-

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duction did not suffer as much in the agricultural countries as it did in advanced industrial countries. For example, the index of the industrial production of Germany in 1929 fell from 100 to 85.9 in 1930, to 67.6 in 1931, and to 53.3 in 1932. The index of the United States was 80.7 in 1930, 68.1 in 1931, and 53.8 in 1932. At the same time, the index number of the industrial production of Denmark was below 100 only in 1932, when it was 91, while in 1933 it was 105 and in 1934, 117. The index number of the industrial production of Greece continued to stay over 100: in 1930 it was 103.4; in 1931, 107.0; and in 1932, 100.9, while in 1938 it reached 165.1.[4]

Finally, the industry of Lithuania, even with expanded facilities, does not satisfy the demands of its home market. For this reason even during the depression the rate of industrial expansion was not greatly slackened.

Aside from coöperative concerns, analysis of which has been made elsewhere, a great role in the economic life of Lithuania was played by corporations.

In some of them, as in the Maistas and Lietuvos Cukrus corporations, the majority of stock is held by the government.

At the end of 1939 there were 137 corporations in Lithuania with total capitalization of 205,442,000 litas. The banking group comprised 8 units with total capitalization of 89,000,000 litas or 43 percent of total capital of the corporations of Lithuania. Next in importance comes food industry with 20 corporations and 28,345,000 litas combined capital followed by 4 electricity supply corporations with 25,100,000 litas of capital stock.

[4] League of Nations, *Statistical Year-Book 1939–40.*

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With the Sovietization of Lithuania by Russia all those corporations were nationalized in August, 1940, and made government establishments. On August 7, 1940, an order was published requesting even the surrender of the shares of capital stock and bonds of private corporations or government.[5] No due compensation was promised.

When Russian occupation was substituted by German in June, 1941, the system of private ownership was returned in Lithuania, except private, corporate, or coöperative wealth, which apparently is kept for distribution to German nationals or at least to German sympathizers.

THE TEXTILE INDUSTRY

The textile industry showed a spectacular rise between 1927 and 1940. But even before this period it had shown considerable advance. It is estimated that in the years 1909 to 1913 this industry in Lithuania employed about 300 workers.[6] In 1927 the number of workers had grown to 1,403, almost five times as many as before the World War, while in 1939 the industry was employing 7,561 workers.

It is interesting to note that in spite of increasing textile production at home, imports did not decrease proportionately. This may be accounted for partly by the fact that rising living standards increased the demand to such an extent that even the increased production was not sufficient to satisfy it without the aid of proportionately high imports. Lithuania does not export any textile fabrics.

The expanding textile industry modifies the type of textile

[5] *Darbo Lietuva* No. 50, Aug. 13, 1940. (*Darbo Lietuva* [Worker's Lithuania] was a Bolshevik daily in Kaunas, established after the occupation.)

[6] L.G.S.A., 1937, p. 405.

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TABLE 35

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THE DEVELOPMENT OF THE TEXTILE INDUSTRY OF LITHUANIA 1927–39

KIND OF ESTABLISHMENT	1927		1930		1935		1939	
	Establishments	*Workers*	*Establishments*	*Workers*	*Establishments*	*Workers*	*Establishments*	*Workers*
Linen and jute weaving	3	112	3	163	5	624	5	827
Flax preparation	16	468	9	534	8	288	11	1,296
Woolen and cotton weaving and spinning	6	589	7	1,229	16	2,922	20	4,051
Wool spinning	17	138	20	142	11	67	23	175
Silk weaving	—	—	—	—	3	651	4	964

imports: there is a tendency toward an increase in semifinished textile goods, especially woolen spun yarns, and a decrease in imports of woolen textile materials (fabrics). In cotton-goods imports this tendency is not so pronounced. This may be due partly to the fact that Lithuania has no raw cotton and the entire supply must be imported. The manufacturing of cotton fabrics is, therefore, almost entirely undeveloped. With woolen fabrics conditions are exactly opposite. A substantial part of the wool is produced at home and, although the quality of Lithuanian wool is not as high as that of Australia or New Zealand, the woolen industries, having been at first wholly dependent on the home supply, were better equipped to expand and improve their production than were the cotton factories. If breeds of sheep are improved as were those of cattle, Lithuanian woolen goods will improve in quality as well as increase in quantity.

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TABLE 36

IMPORTS OF THE LEADING SEMIFINISHED AND FINISHED TEXTILE GOODS

(*In Thousands of Litas*)

YEAR	WOOLEN SPUN YARN	COTTON SPUN YARN	WOOLEN FABRICS	COTTON FABRICS	TOTAL
1928	2,188	6,032	12,952	21,118	42,291
1929	2,413	7,449	14,179	18,600	42,643
1930	2,269	12,019	16,543	21,867	52,699
1931	2,576	8,801	14,980	24,082	50,439
1932	2,034	7,916	7,319	11,370	28,639
1933	3,264	8,917	4,430	8,320	24,931
1934	4,334	7,951	3,717	7,132	23,133
1935	4,173	7,364	3,742	7,271	22,550
1936	7,061	8,662	5,067	10,230	31,020
1937	8,433	8,558	5,795	10,213	32,999
1938	8,433	7,761	5,299	9,536	31,029
1939	5,004	5,499	4,564	8,654	23,721

FOODSTUFFS INDUSTRY

Among Lithuanian industries, foodstuffs occupied first place (41.6%) from the point of view of value of product in 1937 and second place from the point of view of number of people employed. From 1927 to 1938 this branch of industry almost doubled in number of employees. Table 37 shows this expansion. The meat, fish, and canned goods branch showed an exceptional rise. In 1939 the number of workers rose to 1,987 or more than five times the number (362) employed in 1927. The Maistas Corporation, with its five stockyards (Kaunas, Klaipeda, Siauliai, Panevezys, and Taurage), has been responsible for most of this progress.

The Maistas Corporation was originally organized in 1923

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TABLE 37

THE FOODSTUFFS INDUSTRIES

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INDUSTRY	1927		1930		1935		1938		1939	
	Establishments	*Employees*	*Establishments*	*Employees*	*Establishments*	*Employees*	*Establishments*	*Employees*	*Establishments*	*Employees*
Grain mills	83	778	74	638	83	619	99	761	96	706
Bakeries	21	156	29	212	43	319	53	465	46	469
Sugar refineries	—	—	—	—	1	133	2	262	2	246
Candy and chocolate factories	40	760	42	866	29	583	36	761	28	657
Slaughterhouses and meat, fish, and canned goods establishments	20	362	20	281	21	1,029	25	1,721	15	1,787 [a]
Milk-product plants	4	26	18	114	110	407	114	507	102	458
Breweries	10	350	10	351	10	246	11	602	9	553
Tobacco and cigarette factories	12	734	10	695	9	574	8	569	6	546

[a] Before Klaipeda Territory cession: 26 establishments with 1,987 workers.

473 The Maistas Corporation was originally organized in 1923 for the purpose of concentrating on the export of eggs and dairy products, but later its activities were turned to organizing slaughterhouses and to producing and exporting meat and canned products.[7] The original capital of the Maistas Corporation was 500,000 litas, consisting of 5,000 shares at 100 litas par value. The first years of the corporation were not only nonprosperous, but the balance for July 1, 1924, showed a loss of 463,237.60 litas. This loss was covered by stockholders in proportional payments according to the stock

[7] *Pirmas Maisto Desimtmetis 1923–1933 Metai* (Maistas's First Decade, 1923–1933), Kaunas, 1933, p. 28.

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439 pation. In 1938, Maistas sales to foreign countries rose to 57.85 million litas, while in 1939 it rose to 71.7 million litas, or 24 percent above the 1938 figures.

438 Even in domestic business Maistas showed an impressive rise. Its domestic sales amounted in 1930 to 5.8 million litas and rose every subsequent year until in 1938 they reached 14.9 million litas and in 1939, 18.8 million litas.

257 The sugar industry, which also shows considerable ad-
●433 vance, started with one refinery in 1932, employing 67 persons, and in 1939 had two refineries with 246 workers, not counting the many farmers who were engaged in sugar-beet growing and whose incomes were increased through the introduction and development of this branch of agriculture.

257 Inasmuch as the two refineries were insufficient to meet the
471 demands of Lithuania, a third refinery was constructed. All three are owned by the Lietuvos Cukrus Corporation, in which the government participates as owner of a controlling number of shares of capital stock. The first refinery was opened in 1932 in Marijampole and the second in 1935 in Panevezys. The production rose very rapidly: in 1932, 67,000 quintals; 1933, 162,000 quintals; 1934, 82,000 quintals; 1935, 153,000 quintals; 1936, 221,000 quintals; 1937, 272,000 quintals; in 1938, 287,000 quintals [9] and 1939, 208,000 quintals.

234 Another industry in the food-and-luxury category which
433 showed great expansion both in number of establishments and in workers employed is that of dairying, which is covered in the section on coöperatives, above.

438 Other industries, such as grain mills with 761 workers,
433 candy and chocolate factories with 761 workers, and tobacco

[9] C.S.B., 1938, p. 160.

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and cigarette factories with 569 workers, continued to operate at about the same level throughout these past years.

LUMBER INDUSTRY

Some understanding of the lumber industry may be obtained from Table 38.[10] It will be observed that sawmilling

TABLE 38

LUMBER INDUSTRY

BRANCH OF INDUSTRY	1927		1930		1935		1938		1939[a]	
	Establishments	*Workers*	*Establishments*	*Workers*	*Establishments*	*Workers*	*Establishments*	*Workers*	*Establishments*	*Workers*
Sawmilling	131	2,731	114	1,718	124	2,853	175	2,970	170	1,901
Plywood production	—	—	3	443	3	602	3	767	1	27
Cabinet-making	6	90	10	229	8	251	88	963	61	839

[a] After seizure of Klaipeda by Germany.

is the leading branch of the lumber industry, although it does not show great expansion. The same may be said of the plywood industry. The latter felt the greatest setback with the loss of Klaipeda. The lumber industry, producing mainly for export, was hit by the world depression more severely than any other industry.

Before the agricultural products industry was developed for export, lumber was one of the most important items exported from Lithuania. It is to be noted that with the ex-

[10] C.S.B., 1938 and 1939, pp. 170–71 and 160–61 respectively.

3: Simutis S-4 (no date) 1942 RB5 Lithuanians RB5

313 439 pansion of the lumber industry the exported products changed. In 1920 69.1 percent of lumber was exported as raw material as against 30.9 percent semifinished items, while in 1921 this percentage changed to 49.9 percent raw as against 50.1 percent semifinished.

In 1939 this industry experienced a severe blow with the seizure of Klaipeda by Germany, the industry having been concentrated in Klaipeda. With the return of the Vilnius region to Lithuania at the end of 1939, the lumber industry was compensated somewhat, but to what extent it was impossible to establish, since seven months later came the Soviet Russian occupation.

PAPER AND PRINTING INDUSTRY

289 433 The paper and printing industry of Lithuania in 1938 employed 2,615 wage earners and accounted for 8.4 percent of the gross value of Lithuania's industrial production and 10.8 percent of the net value. Therefore, from the standpoint both of the number of wage earners employed and of the value of production, it was in the fourth place. Like the lumber industry, it suffered in 1939 when Germany seized Klaipeda where several of the larger printing establishments were located. Before the German occupation of Klaipeda, Lithuania had 88 establishments with 2,679 workers, while thereafter she had 81 establishments with 1,613 workers.[11]

From the statistics available it may be seen that in 1913 this branch of industry was only in its infancy. In that year there were only 20 establishments with 284 wage earners in the province (gouvernement) of Kaunas, while in 1927, in the same region, there were 52 establishments with 2,115 wage earners. The industry reached its high point in 1930,

[11] C.S.B., 1938 and 1939, pp. 170–71 and 160–61 respectively.

3: Simutis S-4 (no date) 1942 RB5 Lithuanians RB5

when it had 64 establishments and employed 2,323 workers. 289 ·433 ●

As the world depression of 1929 affected Lithuania much later than it did the more advanced industrial countries, the setback in this branch of industry was not felt until 1931, when the number of establishments decreased to 61 and the number of wage earners to 2,157. The all-time low was reached in 1932 when only 1,924 persons were employed. The next year a slight revival was felt and from that year the industry was on the upswing until in the beginning of 1939 it reached an all-time peak with 88 establishments and 2,679 wage earners.

The chief branch of the paper and printing industry is that of woodpulp and paper production. Although this branch is represented by only five establishments, it is greatest from the standpoint of number of workers employed: it accounts for from 40 to 45 percent of all workers in the paper and printing industry. The number employed in woodpulp and paper production was almost the same in 1938 as in 1927—1,159 and 1,133 respectively—although in 1932 it had dropped to 688. The production of woodpulp as well as paper and cardboard has increased very substantially since 1931.

The printing branch of the industry also showed considerable expansion. In 1927 there were 33 printing establishments, with 658 wage earners. By 1938 the industry had 51 printing establishments and 1,153 wage earners and in 1939, 50 establishments with 843 wage earners. Even the depression of 1929 did not greatly affect this branch of industry. Except for a slight setback in 1934 and in 1935, in which years the number of employed decreased to 801 and 777 respectively, the printing business continued to grow.

121 The following Report of the Chamber of Commerce, Industry and Crafts pursues the purpose of a concise and clear review of the history of the development of Lithuanian economy during the last ten years. With the exception of agriculture, it deals with all spheres of economics, i. e. industry, foreign and home trade, goods transport, the State finances, and credit conditions.

433 The synthesis of the dynamic of separate economic branches establishes the conclusion that Lithuanian political economy during the past ten years has achieved great progress. Although under the influence of the world economic crisis in the years 1932—1935 it suffered reverses or was at any rate hindered in its growth, the total balance of the ten years on an average shows a doubling of the real volume. Especially the years 1930—1931 and 1936—1937 were signalized by vigorous promotion and expansion periods. Whereas world economy in the autumn of 1937 once more revealed symptoms of a recession, in Lithuania the rising tendency continued.

The greatest successes were achieved in the domain of industry; its production grew uninterruptedly also during the crisis and has on an average increased two and a half times. The liquidation of Free Trade and the confinement of separate politico-economic spheres within their national boundaries under the operation of the world economic crisis, as in other agrarian countries so also in Lithuania have contributed to intensification of the development of home industry.

439 The Lithuanian foreign trade turnover has suffered loss during the crisis as a result of the fall of prices. Its volume nevertheless remained even during the crisis years above the level of 1929. The introduction of the licence system facilitated the maintenance of the active general trade balance in the crisis years and regulation of the trade balance with individual countries.

438 In the domain of home trade, the growth of cooperative trade must above all be premised. Private trade is developing unequally; for while intermediary wholesale trade is receding,

A. GENERAL SECTION.

1. Total Number of Industrial Undertakings and their Structure.

● 433

The total number of industrial undertakings in Lithuania is estimated at 3 000.

The number of industrial licences issued in 1937 amounted to 15 214, of which, however, 12 981 together were apportioned to the VIII. and IX. categories, which can be assigned to handicrafts. The undertakings of the Memel Territory are not included in these figures.

The statistics of industrial licences for the last ten years are as follows:

1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
5 742	6 010	5 842	5 796	5 735	5 451	5 710	11 904	14 750	15 214

The sudden rise in the number of industrial licences in 1935 is due to the fact that in that year the Patent Tax was extended to small hand-worked concerns without auxiliary power and those with only a single worker, whereas until then only concerns with two employees upwards had been required to take out a licence. The figures for the last three years are therefore not comparable with those for the previous years, but they nevertheless reflect the vigorous rise of Lithuanian economy in 1936 and 1937.

Through the direct computation, which is carried out periodically twice yearly, only such industrial undertakings are included as employ at least five persons. The relevant data on the total number of concerns for the last ten years are as follows:

[p 10 is blank]

1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
1 039	1 044	1 051	1 049	1 105	1 108	1 118	1 136	1 135	1 247

With the exception of 1937, which indicates a big increase of 112, and therefore emphasizes the present-day advance, the remaining modifications in the number of undertakings during previous years are not inconsiderable from a contingent standpoint. They demonstrate that Lithuanian industrial economy did not suffer any serious retrogression in its development through the last crisis. In the very year of the low level of the world crisis (1932), the total number of industrial undertakings in Lithuania actually increased.

The contingent development of Lithuanian industry is, however, better shown by the total number of industrial workers employed, and still more accurately by that of the effective working days than by the number of concerns. In the concerns already specified above, with a minimum staff of five persons, the following number of workers was engaged in June or July, i. e. at the time when almost all seasonal workers are fully employed:

		i. e. with the following number of working-days:	
1928	18 930		
1929	19 637		
1930 (June)	19 334		
1931 (June)	21 053	1931 (June)	504 979
1932 (June)	19 743	1932 (June)	473 621
1933 (June)	20 660	1933 (June)	472 710
1934 (June)	22 282	1934 (June)	527 244
1935 (July)	23 344	1935 (July)	584 958
1936 (July)	25 844	1936 (July)	647 468
1937 (July)	31 689	1937 (July)	775 984

We see from the foregoing figures that the influence of the economic crisis first made itself perceptible in 1932, since until 1931 the number of employed industrial workers was still on the up-grade. We may therefore select 1931 as a basis year, and on the ground of the figures of working-days calculate the following indices of the employment of the industrial economy of Lithuania:

1931	1932	1933	1934	1935	1936	1937
100.0	93.8	93.6	104.4	115.8	128.2	153.7

Already on the basis of these figures (an attempt to compute the production index is undertaken in the following chapter) we may assume that the stagnation in the industrial economy of Lithuania elicited by the crisis which, moreover, did not extend to all industrial branches, began about two years later than in the rest of the world and lasted only two years (world crisis 1930 — 1932, in Lithuania 1932 — 1933) and that the recession of employment amounted to only 6.4% of the erstwhile highest level in 1931.

The regularly progressive upbuilding of Lithuanian economy, despite the crisis, is likewise disclosed in the statistics for the utilization of engine power by industrial concerns. The relevant data for the last seven years are as follows:

Utilization of Engine Power.

	1931	1932	1933	1934	1935	1936	1937
Total number of concerns	1 049	1 105	1 108	1 118	1 136	1 135	1 247
Number of concerns with engine power..	747	788	819	822	842	864	946
Water, steam, and Diesel engines in H. P.	51 862	62 878	67 536	66 776	74 207	74 722	79 830
Electric-motors in H.P.	18 176	21 926	28 215	27 809	31 142	34 912	45 327
Total in H. P.	70 038	84 804	95 751	94 585	105 349	109 634	125 157
in %	100.0	121.1	136.7	135.0	150.4	156.5	178.7

On the basis of these figures we can determine: (a) That the share of mechanized concerns in the total number of industrial undertakings from 1931 until 1937 has risen from 71.2% to 75.9%; (b) That the engine power pertaining to a mechanized concern rose in the same interval from 93.8 H. P. to 132.3 H. P.; (c) That the total energy of the engines employed in Lithuanian industry has grown by 18.7% during the last seven years; the energy of the primary power engines was increased thereby 53.9% while that of electric-motors was more than doubled — it has risen by 149.4%.

* * *

● 432 A particularly marked advance is shown by larger undertakings with 50 or more employees*), which represent wholesale industry proper. The following figures illustrate this:

I. Undertakings with 5—49 Employees.

	1930	1931	1932	1933	1934	1935	1936	1937
Total number of undertakings	969	955	1 015	1 010	1 020	1 038	1 034	1 124
Total number of employees	11 473	11 927	11 402	10 906	11 033	11 072	11 598	13 206

II. Undertakings with 50 and more Employees.

Total number of undertakings	82	94	90	98	98	98	101	125
Total number of employees	11.023	12.433	11.844	13.479	15.123	16.298	18.650	23.387

On the basis of the foregoing figures we can reckon that the medium-sized undertakings during the period from 1930 to 1937, in respect of their total number grew by 15.9%, and in respect of the number of employed personnel, by 15.1%, while the large-scale undertakings in the same time showed an increase of 52.4% in their number and 112.2% in the number of employees.

465 The development of industrial activity is also illustrated by the growth of the total amount of wages paid out. The following figures relate to the months of June and July (in thousands of litas):

1931.VI.	1932.VI.	1933.VI.	1934.VI.	1935.VII.	1936.VII.	1937.VII.
3 636	2 991	2 918	2 927	3 011	3 285	4 237

Compared with the index of the cost of living minimum, these tables show, notwithstanding the decrease of nominal

*) In the „number of employees", the promoters, the workers, and the officials are included.

465 wages, a rise in real wages of approximately 12% since 1931. In various individual branches, moreover, the wages standards of qualified workers were raised not only in 1937 but also in 1935 and 1936, which the above quoted average figures do not indicate, owing to the preponderance of unqualified workers, as a result of the frequent engagement of new employees.

* * *

464 ●433 The internal structure of Lithuanian industry in respect of the number of undertakings and the total number of employed workers in separate industrial branches are shown by the following Table No. 1.

288 433 464 On the basis of these statistics we may conclude that the largest number of workers, viz., 20.6% of all industrial workers in Lithuania to-day are employed in the textile industry. On an average, a staff of 88 workers pertains to one textile factory.

The first place in respect of the number of employed workers has, however, been reached by the textile industry in recent years, i. e. since 1935. Among all industrial branches in Lithuania it also shows the most intensive development. In spite of the crisis, the number of employed in the textile concerns since 1928 has steadily grown and in comparison with 1928 its position in 1937 had more than quadrupled (+317.5%).

This high level of the employed reflects, however, only the maximum utilization of labour capacity. Thus in 1937 the textile industry was the only branch that employed three shifts, since according to the number of undertakings, viz., 74, it stands far behind other branches.

313 433 464 In the second place stands the timber industry with 16.9% of the total number of workers and 17.6% of the number of undertakings. The size of the staffs rose by 51.1% during the period from 1928 to 1937, the most noteworthy increase having taken place in 1937.

262 433 464 In the third place follows the foodstuffs and luxury goods industry with 16.4% of the total number of workers. According to the number of undertakings (353 concerns or 28.3%), it is, however, entitled to the first place. The total number of the staffs in 1937 in comparison with 1928 shows an increase of 35.4%, which took place during the last three years. During

6: Anonymous U-4, 5 (no date) 1938 RB5 Lithuanians RB5 ● 433 464

Table No. 1.

Classification of Industrial Undertakings of Lithuania according to Branches from 1928 — 1937.

Branches	1928		1929		1930		1931		1932		1933		1934		1935		1936		1937	
	Undertakings	Workers	Undertakings	Workers	Undertakings	Workers	Undertakings	Workers	Undertakings	Workers	Undertakings	Workers	Undertakings	Workers	Undertakings	Workers	Undertakings	Workers	Undertakings	Workers
I. Peat-cutting	7	578	4	536	6	541	4	490	5	512	4	482	5	515	7	417	10	578	11	629
II. Earth & Stone Industry	91	1 391	106	1 606	108	1 648	104	2 160	101	1 928	84	1 544	97	1 749	82	1 539	89	1 627	99	2 827
III. Metal & Machinery Ind.	93	1 930	85	1 877	94	1 975	95	1 863	93	1 675	86	1 507	91	1 614	92	1 711	86	2 178	103	2 792
IV. Chemical Industry	51	888	52	981	53	792	48	724	46	642	55	901	48	1 355	48	940	47	1 109	48	1 344
V. Leather Industry	36	539	37	635	44	649	36	693	36	614	45	733	41	760	44	824	48	810	51	1 006
VI. Textile Industry	59	1 562	62	1 952	57	2 194	60	2 287	60	2 517	62	2 974	56	3 442	61	4 679	64	5 576	74	6 522
VII. Timber & Woodwork Ind.	193	3 539	178	3 636	178	3 096	193	4 308	210	3 783	211	4 276	198	4 394	192	4 238	181	4 064	219	5 346
VIII. Paper & Polygraphic Ind.	58	2 160	63	2 209	64	2 323	61	2 157	68	1 924	69	2 032	65	2 141	71	2 195	71	2 316	76	2 559
IX. Foodstuffs & Luxury Goods Industry	255	3 837	262	3 773	246	3 616	239	3 752	286	3 735	286	3 772	311	3 811	343	4 284	341	4 770	353	5 195
X. Clothing & Footwear Ind.	147	1 653	149	1 818	154	1 891	157	1 994	142	1 723	140	1 807	148	1 879	148	1 952	146	2 176	157	2 707
XI. Electricity & Gasworks	31	661	28	504	28	479	30	480	30	465	33	448	34	486	31	512	31	508	32	523

[252] the interval 1928—1934 hardly any changes were experienced [433] in the dimensions of the staffs.

To the three above-mentioned industrial branches (textile, timber, and foodstuffs industries) pertain in all 646 undertakings with 17 063 workers, or more than half the total number of concerns and their staffs.

464 The remaining more important industrial branches range, 433 according to the number of employed workers, as follows: The stone and earth industry, which during the last ten years has doubled its staff; the metal and machinery industry, the growth of whose employed workers in the same period amounts to 44.7%; the clothing and footwear industry, with a growth of 63.6%; the paper and polygraphic industry, the staff of which has grown by 18.5%; the chemical industry, which to-day employs 51.3% more workmen than in 1928, and the leather industry, which also in the last decade has enlarged the extent of its staff, i. e. by 71.4%.

The smallest number of workers is employed in peat-cutting and in electricity works. The staff of the former during the last ten years has grown only a little; that of the latter has suffered even a slight retrogression which, however, was in no wise evoked by a falling-off in production but rather by its rationalization, as we see from the production statistics.

2. Aggregate Value of Industrial Production and the Production Index.

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The aggregate value of the gross production of the concerns comprised in the statistics (from five employees upwards) amounted in 1937 to 428 200 000 litas against 354 500 000 litas in 1936, which in the course of the last year implies an ad valorem growth of 20.8%. Segregation into separate industrial branches gives the following result:

	1936		1937	
	In 1000 litas	Percentage share	In 1000 litas	Percentage share
1. Peat-cutting	960	0.3	1 126	0.3
2. Stone & Earth Industry	5 461	1.5	8 481	2.0
3. Metal & Machinery Ind.	17 125	4.8	22 406	5.2

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4. Chemical Industry	16 713	4.7	21 170	4.9
5. Leather Industry	13 931	3.9	18 189	4.3
6. Textile Industry	52 273	14.8	63 873	14.9
7. Timber Industry	26 576	7.5	38 745	9.1
8. Paper & Polygraphic Industry	27 584	7.8	36 029	8.4
9. Foodstuffs & Luxury Goods Industry*)	161 007	45.4	178 266	41.6
10. Clothing & Footwear Industry	18 037	5.1	22 691	5.3
11. Electricity Works	14 832	4.2	17 293	4.0
Total:	354 508	100.0	428 219	100.0

From the standpoint of production value, the foodstuffs and luxury goods industry holds the first place, while the textile industry and the timber industry stand in the second and third place respectively. In 1937 nearly two-thirds, i. e. 65.5% of the total production value of Lituanian industry pertained to these three branches.

Of the remaining branches there follow in the order named: The paper and polygraphic industry, the share of which in the total production value amounts to over 8%; the clothing and footwear industry; the metal and machinery industry, and the chemical industry, each with a percentage of approximately 5%; the leather industry and the electricty works with a percentage each of 4%; the stone and earth industry whose production value constitutes 2% of the total production; and in the last place, peat-cutting with a share of only 0.3%.

In comparison with the previous year, several changes took place in 1937 in the structural composition of industry, inasmuch as the percentage share of the foodstuffs and luxury goods industry decreased by 4 points; the shares of peat-cutting and electricity works remained almost unaltered, while all other branches raised their shares, inter alia, the timber and paper industries to the greatest extent. The lessening of the share of the foodstuffs and luxury goods industry is to be ascribed

*) N. B. These figures also include the butter and cheese production of the dairy-farming cooperatives. Its value in 1936 amounted to 44 805 000 litas and in 1937 to 51 506 000 litas.

to the quantitative and ad valorem recession of the output of the meat industry. The special increase of the share of the timber and paper industries is due, besides the quantitative advance in production, also to the fact that timber and cellulose prices have risen more sharply than those of other articles, while the slight decline in the share of electricity works has resulted from the reduction of about 5% in the price of current. 433 ●

One cannot, however, draw any general conclusions from the above quoted value figures, as regards their quantitative development, because prices have varied during the period under review, and this variation has proceeded individually in each commodity group. We shall therefore return below to this question in the calculation of the production index and in the analysis of the production of separate industrial branches in the following section.

As already mentioned, the figures contained in the foregoing statement represent gross production value. Under the heading of net production value, the specific gravity of separate industrial branches naturally appears in an altered light, because the scope of the politico-economic growth of value is influenced by the divergent levels of the raw materials share. The following table shows us the structure of Lithuanian industry according to net production value (in thousands of litas):

	Gross Production Value	Raw Material and Fuel used		Net Production Value	Percentage share of Total Value
		Domestic	Foreign		
1. Peat-cutting	1 126	65	2	1 059	0.7%
2. Stone & Earth Industry	8 431	1 006	1 405	6 020	3.7%
3. Metal & Machinery Industry	22 406	2 095	9 822	10 489	6.4%
4. Chemical Industry	21 170	3 805	7 084	10 281	6.3%
5. Leather Industry	18 189	6 139	8 407	3 643	2.2%
6. Textile Industry	63 873	12 783	27 504	23 586	14.3%
7. Timber Industry	38 745	18 977	4 916	14 852	9.0%
8. Paper & Polygraphic Industry	36 029	12 090	6 119	17 820	10.8%
9. Foodstuffs & Luxury Goods Industry*)	178 286	113 892	13 970	50 404	30.6%

*) Since no value figures of the raw materials used for the meat industry are published, they are estimated at 70% of the gross production value.

● 423

10. Clothing & Footwear Industry	22 891	4 339	6 974	11 378	6.9%
11. Electricity Works	17 293	277	1 966	15 050	9.1%
Total:	428 219	175 468	88 189	164 582	100.00

The net production value of Lithuanian industrial output thus amounted in 1937 to 164 582 000 litas, which constitutes 38.4% of the gross production value. The politico-economic value growth, which is derived from the industrial treatment of the raw material, amounts to 62.4%. The relatively restricted magnitude of value growth — in highly industrialized lands such as Great Britain and the U.S.A. it reaches 120% on an average — is due chiefly to the great importance of the foodstuffs industry, wherein, as is well known, the share of raw material is always particularly large.

Comparison of the share of separate industrial branches, reckoned according to gross and net values, shows that, as regards gross value more especially, great weight attaches to the leather industry and the foodstuffs and luxury goods industry on account of the high proportion of raw material; and, on the other hand, as regards net value, to electricity works and the paper and polygraphic industry.

*
* *

The ascertained production value for 1936 and 1937 depends upon an uninterrupted grasp of all industrial branches of Lithuania. In view of the fact that the total value amounts obtained for earlier years do not comprise complete data to the same degree, in order to represent the contingent development for the period 1929—1937, only the production amounts of the most important industrial branches, which methodologically supply comparable quantities, can be included. Thus the data placed at our disposal comprising 80% in round figures of the aggregate industrial output are sufficiently representative correctly to depict the general development tendency.

(The year 1933 has been omitted from the appended table because no statistical data on industrial production are available for that year).

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Gross Production Value of the most important Industrial Branches (in 1 000 litas).

	1929	1930	1931	1932	1934	1935	1936	1937
1. Peat-cutting	1 080	922	878	617	509	569	969	1 126
2. Stone & Earth Industry	5 264	5 717	7 452	5 667	4 535	4 053	4 851	7 424
3. Metal & Machinery Industry*)	10 729	12 465	12 106	9 177	8 764	8 292	12 343	16 449
4. Chemical Industry	21 604	20 897	17 782	14 660	17 963	15 555	16 115	20 637
5. Leather Industry	14 591	15 525	14 601	10 027	8 967	8 781	11 572	15 116
6. Textile Industry	23 223	27 595	27 356	25 205	35 554	40 710	50 440	61 512
7. Timber Industry	35 015	27 038	32 669	25 586	24 575	24 212	26 576	38 745
8. Paper & Polygraphic Industry	42 214	41 174	29 631	21 144	25 017	23 739	27 436	35 807
9. Foodstuffs & Luxury Goods Industry**)	93 480	85 674	132 995	135 537	95 228	92 406	108 336	118 110
10. Clothing & Footwear Industry	10 030	12 173	13 104	10 673	11 720	12 349	15 382	19 619
11. Electricity Works	10 842	11 500	12 500	11 880	11 310	12 068	12 851	15 172
Total:	268 052	260 680	301 174	270 166	244 140	239 764	286 874	349 717

In order to be able to assess the development of the industrial production according to its quantitative extent on the basis of the foregoing figures, we must first of all bear in mind that prices since 1929 on an average have fallen almost by half, in view of which the volume of production discloses actually a much greater increase than that indicated in the foregoing values. Calculated on the basis of an appropriate price index, above mentioned, value amounts of industrial production, expressed in the prices of 1929, show the following figures (in 1 000 litas):

*) Without production of means of communication.

**) Without butter production.

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	1929	1930	1931	1932	1934	1935	1936	1937
1. Peat-cutting	1 060	922	905	1 611	979	1 274	1 977	2 298
2. Stone & Earth Industry	5 284	5 971	7 850	7 247	8 262	7 966	9 769	12 080
3. Metal & Machinery Industry	10 729	13 261	15 324	13 905	14 607	15 356	23 288	24 922
4. Chemical Industry	21 604	21 231	21 169	19 810	30 970	28 731	39 990	36 205
5. Leather Industry	14 591	17 055	17 806	14 224	16 304	18 681	25 156	31 492
6. Textile Industry	22 223	31 278	38 622	41 680	65 087	68 947	102 025	120 358
7. Timber Industry	35 615	26 533	29 338	31 717	43 883	48 424	54 236	61 500
8. Paper & Polygraphic Industry	42 214	43 802	35 275	28 572	43 132	42 961	52 761	62 819
9. Foodstuffs & Luxury Goods Industry	93 480	96 263	166 244	193 824	161 400	174 351	216 672	222 849
10. Clothing & Footwear Industry	10 030	12 826	16 163	15 561	22 196	28 296	35 319	41 439
11. Electricity Works	10 842	13 487	15 049	15 103	17 911	20 643	22 812	28 560
Total:	268 052	282 629	363 945	381 954	424 729	454 582	573 005	644 549

The conversion of the value data follows on the authority of the following sources in each instance, viz.,

1. **For peat-cutting**: Price-index, calculated on the basis of the average value of the production statistics of the Central Statistical Bureau;

2. **For the Stone and Earth Industry**:

(a) For the brick production price-index, calculated on the basis of the average value of the production statistics of the Central Statistical Bureau;

(b) For glass production, price-index of Industrial Products of the Lietuvos Bankas (Bank of Lithuania) Bulletin.

3. **For the Metal and Machinery Industry**: Price-index for iron and steel calculated according to the average prices of the Lithuanian import statistics, price-index of Industrial Products of the Lietuvos Bankas Bulletin and the price-index of fuel of the Lietuvos Bankas Bulletin (adjusted arithmetical average according to the ratio 5;5;1);

4. For the Chemical Industry: Price-index of Industrial Products of the Lietuvos Bankas Bulletin; 433

5. For the Leather Industry: Price-index for sole leather, calculated according to the Price Statistics of the Central Statistical Bureau;

6. For the Textile Industry:

(a) For flax treatment, index of flax prices of the Central Statistical Bureau;

(b) For the remaining branches of the textile industry, price-index of manufactured goods of the Lietuvos Bankas Bulletin;

7. For the Timber Industry: Price-index for pine-boards calculated according to the price statistics of the Central Statistical Bureau;

8. For the Paper and Polygraphic Industry: Price-index for industrial products of the Lietuvos Bankas Bulletin;

9. For the Foodstuffs and Luxury Goods Industry: Price-index of provisions of the Lietuvos Bankas Bulletin;

10. For the Clothing and Footwear Industry:

(a) For the Clothing Industry, price-index of manufactured goods of the Lietuvos Bankas Bulletin;

(b) For the Footwear Industry, price-index for shoes of the Central Statistical Bureau;

11. For Electricity Works: Index of the price of electric current, calculated on the basis of the average value of the production statistics of the Central Statistical Bureau.

The value series, converted in this manner to the prices of 1929, afford an adequately reliable foundation for the calculation of the production index. This course had therefore to be selected because the data at our disposal on the volume of production methodologically differ from one another and are insufficient to enable us to form comparable proportion series for the entire period under review (1929—1937).

Expressed in percentages, the above value figures furnish the following index series of the separate branches of Lithuanian industry (basis year 1929):

●433

	1929	1930	1931	1932	1934	1935	1936	1937
1. Peat-cutting	100.0	87.0	85.4	95.4	92.4	120.2	186.5	216.8
2. Stone & Earth Industry	100.0	113.4	149.1	137.6	156.9	151.3	185.5	229.4
3. Metal & Machinery Industry	100.0	123.6	142.8	129.6	136.1	143.1	217.0	232.3
4. Chemical Industry	100.0	98.3	98.0	91.7	143.3	128.4	143.4	167.6
5. Leather Industry	100.0	114.1	122.0	98.2	111.7	128.0	172.4	215.8
6. Textile Industry	100.0	134.8	166.4	179.9	280.3	296.9	439.3	517.8
7. Timber Industry	100.0	75.8	84.4	88.9	125.3	138.3	154.9	175.6
8. Paper & Polygraphic Industry	100.0	103.8	83.6	67.7	102.1	104.1	124.9	148.8
9. Foodstuffs & Luxury Goods Industry	100.0	102.9	177.8	207.1	172.7	185.4	231.8	238.4
10. Clothing & Footwear Industry	100.0	127.9	161.1	155.1	221.3	261.7	332.2	413.1
11. Electricity Works	100.0	124.4	138.8	139.3	165.2	190.4	210.4	263.7

An analogous conversion of the total amounts would provide a general production index appraised according to the gross value shares. The foregoing inquiry has, however, shown that in consequence of the predominant rôle of foodstuffs production in Lithuanian industry, an appraisement according to gross values would distort the general contingent aspect. An appraisement according to net values, notwithstanding some immaterial nuances, undoubtedly most faithfully portrays the variations of the real economic yield of industry. According to the net value coefficients which, on the basis of the relationships of the gross and net production value for 1937, were correspondingly calculated for each relevant year, adjusted averages supply the following index series of the aggregate industrial production of Lithuania:

Production Index of Lithuanian Industry

1929	1930	1931	1932	1934	1935	1936	1937
100.0	108.3	140.7	153.7	166.5	185.9	244.2	272.0

These figures generally agree, notwithstanding the deviation in 1932, as regards the development tendency, with the employment index already mentioned and calculated on the basis of the workdays statistics, as also with the index of the

mechanization of Lithuanian industry. For the sake of comparison, we once more quote all three index series, converted to the year 1931: 483 ●

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	1931	1932	1933	1934	1935	1936	1937
Employment Index	100.0	93.8	93.6	104.4	115.8	128.2	153.7
Mechanization Index	100.0	121.1	136.7	135.0	150.4	156.5	178.7
Production Index	100.0	109.2	·	118.3	132.1	173.6	193.3

The divergent course of the employment index and the production index in 1932, as also the significantly high figure of the latter are the natural result of the enhancement of labour productivity in consequence of the greatly increased mechanization, which the middle index series expresses.

A comparison of the Lithuanian production index with the Index of World Production (without the U. S. S. R.) of the Statistical Section of the League of Nations, published in the „Bulletin mensuel de statistique" in June, 1938, gives the following result:

World Production

1929	1930	1931	1932	1933	1934	1935	1936	1937
100.0	88.3	74.8	63.0	71.3	77.0	85.4	95.5	102.5

Production of Lithuania

100.0	108.3	140.7	153.7	·	166.5	185.9	244.2	272.0

This comparison shows that, in spite of the world economic crisis, Lithuanian industry has not been checked in its growth. Thus in 1932, i. e. at a time when world production had suffered a loss of 37% of its position of 1929, Lithuanian production, in comparison with 1929, had risen 53.7%. In the years 1932—1934 the tempo of its development had only slackened, while since 1935 once more a vigorous upward trend has set in, and in 1937 the position of 1929 was more than two and a half times exceeded. This favourable course of Lithuania's industrial production characterizes the foundation period in which the youthful industry of our agricultural land is situated. The re-

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● 433 tardation of the export of agricultural produce in consequence of the last world economic crisis as also the liquidation of international free trade have, as in many other agricultural countries, also in Lithuania given a stimulus to the accelerated expansion of domestic industry, in order in this way to make good the losses caused by the agrarian crisis.

The enormous discrepancy in the course of both the above compared index series is of course partly attributable to the choice of the basis year, the significance of which is not identical for both the contrasted spheres of production. Whereas for world production 1929 constituted the peak year before the crisis and consequently the starting-point of the new cycle, 1931 was doubtless according to the sense taken as the basis year for Lithuanian industry, as is apparent from the later cited analysis of the production index of separate industrial branches. For the sake of comparison, however, 1932 is the most favourable, because in that year the conjuncture situation of both spheres was relatively most alike. The conversion of both series to the year 1932 furnishes the following result:

1929	1930	1931	1932	1933	1934	1935	1936	1937
World Production								
158.7	140.2	118.7	100.0	113.2	122.2	135.6	151.6	162.7
Lithuanian Production								
65.1	70.5	91.5	100.0		108.3	120.9	158.9	176.9

We see from this that in the years 1929—1931 and 1936—1937 Lithuanian production showed a more favourable development than production on a world scale; that in the years 1933—1935 the development of Lithuanian industry lagged behind the tempo of world production; that the production of Lithuanian industry is certainly constantly growing, although its development tempo proceeds more irregularly than that of world production.

The last-named circumstance is still more precisely illustrated by the following comparative figures, which express the occasional percentage variations of production in relation to the past year:

Diagram No. 1.

Index Curve of Lithuanian Industry (1931=100)

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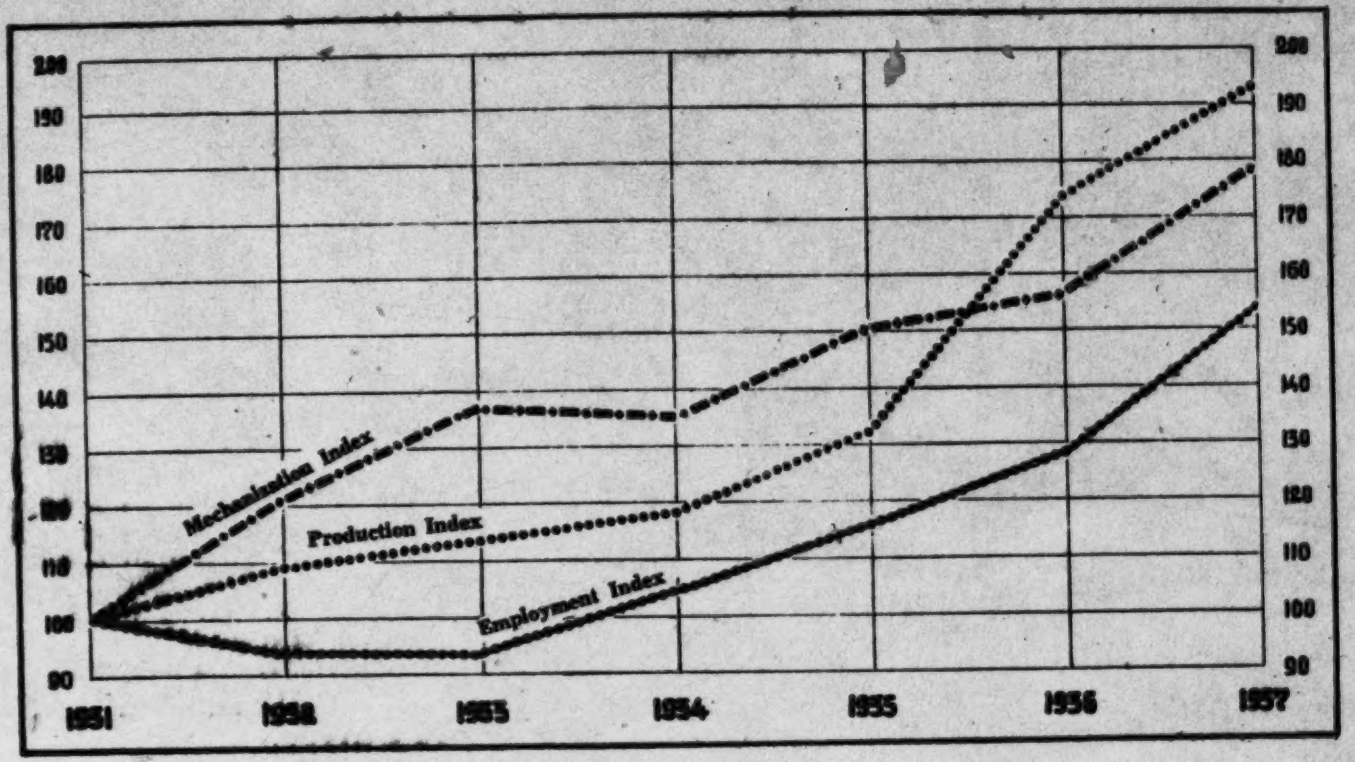

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Production Growth or Fluctuation in Percentages

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	1930	1931	1932	1933/34	1935	1936	1937
World	—11.7	—15.3	—15.8	+22.2	+10.9	+11.8	+7.3
Lithuanian	+8.3	+29.9	+9.2	+8.3	+11.6	+31.4	+11.4

To sum up, we may describe as follows the distinctive course of world production and the industrial production of Lithuania disclosed in all three preceding tables:

1. The circumstance that the influence of the world crisis on Lithuanian industry was first discernible in the third year, but that, on the other hand, its restricted operation lasted three years longer, is explained by the agrarian character of the country, while in 1935 also politico-commercial difficulties had a hindering effect.

2. The high final figures of the Lithuanian production index as also its buoyant progress (i. e. in 1931 and 1936) are explained by the low initial stage and new promotions, and the extension of many industrial branches which ten years before were either wholly lacking, viz., the sugar industry, bacon manufacture, rubber goods production, or existed only to a minimum extent, i. e. the textile industry, more particularly, &c.

3. While the slackening of the upward trend of world production in 1937 accentuated the economic crisis which had already in autumn broken out in the United States, the lower percentage of growth of the general index of Lithuanian industrial production in 1937 in comparison with 1936 is to be ascribed chiefly only to the preceding retrogression of corn-milling in consequence of a less favourable harvest and that of meat production in 1937; the restricted upward trend due thereto of the index of the foodstuffs industry was bound to exercise a prejudicial effect upon the development of the general production index, in view of its predominant rôle in Lithuanian industry.

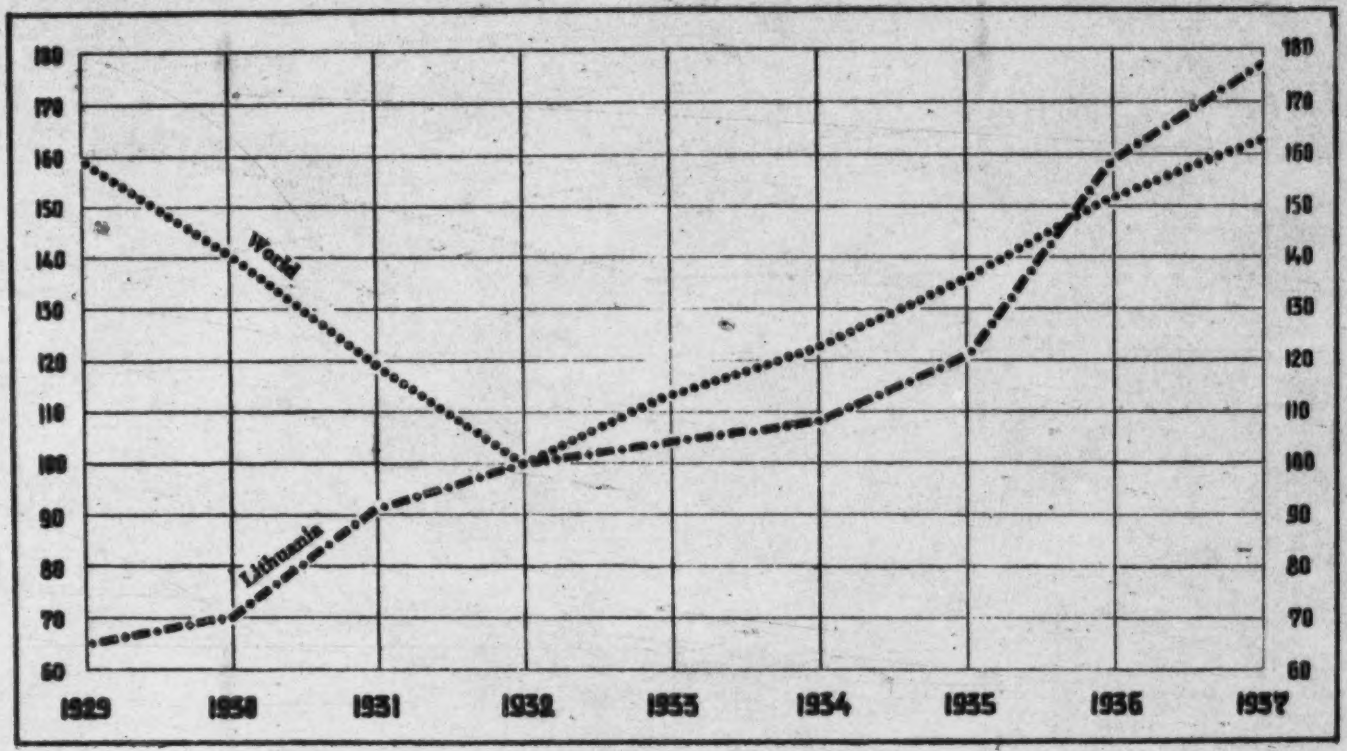
* * *

The general index of the total industrial production of Lithuania naturally expresses only the average of the occasionally diverse development tendencies of separate industrial branches. Their special production indices show, for example,

Diagram No. 2

● 433

Comparative Indices of Industrial Production (1932=100)



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6: Anonymous U-4, 5 (no date) 1938 RB5 Lithuanians RB6

433 that several branches had already in 1930 and 1931 suffered a more or less severe recession. The majority, however, grew unhindered until 1931 and for the first time in 1932 the crisis extended to six branches: The stone industry, chemical industry, metal industry, leather industry, paper industry, and clothing and footwear industry. The fact that notwithstanding this stagnation in separate branches of industry, the general production index in 1932 shows no recession, but only a slackening of growth, is in the first place to be ascribed to the establishment of the sugar industry in 1931 and the then upward trend of the meat industry, which since then has not again reached the peak level attained precisely in the crisis years. (In 1937, as already mentioned above, the general contingent aspect of Lithuanian industrial production was influenced in the opposite sense by the foodstuffs industry).

The textile industry and the output of electric current are the separate branches which, since 1929, have uninterruptedly grown. With the exception of the chemical industry and the stone and earth industry, which still in 1935 suffered a setback, the upward trend since 1935 has spread to all remaining branches. The separate branches, however, also now show a more or less divergent development among themselves; they can be correspondingly divided into the following three groups:

1. The first group is composed of the textile industry and the clothing and footwear industry; the production of the former has quintupled since 1929, while that of the latter has quadrupled.

2. The second group belongs to: Electricity works, the foodstuffs industry, the metal and machinery industry, the earth and stone industry, the peat industry, and the leather industry; all these branches have more than doubled their production since 1929.

3. To the third group pertain: The timber industry, the paper and polygraphic industry, and the chemical industry; the production growth for these branches since 1929 amounts to approximately 50—75%.

More detailed data on the development of separate industrial branches are contained in Section B of this chapter (vide „Special Part").

3. The Geographical Distribution of Lithuanian Industry

The principal centres of Lithuanian industry are Kaunas, Memel, and Šiauliai. To Kaunas (the city and district) in January, 1938, pertained 37.7%, to the Memel Territory 27.5%, and to the Šiauliai district 10.3%, so that to all three in the aggregate in round figures related three-quarters of all the industrial workers employed in Lithuania.

The development of the geographical distribution of Lithuanian industry during the last ten years is shown by the following comparison of the relevant statistical data:

	Kaunas		Memel		Šiauliai	
	Undertakings	Workers	Undertakings	Workers	Undertakings	Workers
1929	300	6 762	169	5 695	131	2 525
1930 (June)	315	7 334	182	5 457	129	2 517
1931 (June)	343	7 405	137	5 604	129	2 501
1932 (June)	333	6 868	148	5 094	141	2 340
1933 (June)	339	7 568	139	5 618	129	2 105
1934 (July)	334	8 321	150	6 477	131	2 104
1935 (July)	347	8 435	141	7 215	130	2 214
1936 (July)	354	9 721	141	7 214	132	2 684
1937 (Jan.)	340	10 439	137	7 120	125	2 861
1938 (Jan.)	423	11 972	141	8 354	138	3 126

We see from the foregoing table that the most active development of the Kaunas district shows: The number of the undertakings since 1929 has increased there by 41% and the number of employed industrial workers by 77%. In the Memel Territory during the same interval the number of undertakings has fallen by 16.6%, but the number of workers has risen by 46.7%. Šiauliai displays the smallest increase; the number of undertakings there has risen by 5.3% and the number of workers by 23.8%.

Thanks to this development, the rôle of Kaunas as the most important centre of Lithuanian industry, in comparison with that of Memel and Šiauliai, has not only absolutely but also relatively grown considerably during the last ten years.

From the standpoint of separate industrial branches, there have been concentrated in Kaunas in the first place the metal and machinery industry, the chemical industry (production of rubber goods), the stone industry (glass factories and the treatment of paving-stones), the paper industry, and woven goods manufacture. Besides these preponderating branches, a

433 438 considerable part of the wool and cotton spinning and weaving, the timber sawing, furniture manufacture, the foodstuffs and luxury goods industry, &c. is situated in Kaunas.

In Memel is located the largest part of the timber industry (sawing, plywood supply, and cellulose production), the predominant portion of the wool and cotton industry (two-thirds), the artificial fertilizer industry, a considerable share of the foodstuffs and luxury goods industry (meat treatment, tobacco manufacture), &c.

In Šiauliai are concentrated 85% of the Lithuanian leather industry (tanning), nearly 60% of the footwear industry, and two-thirds of the flax treatment industry. In the district of Šiauliai (at Pavenčiai) is situated a sugar factory (the second in Lithuania) which was established in 1935. In Šiauliai itself also four chocolate and sugar ware factories are in operation.

Besides the foregoing three principal centres of industry should also be mentioned: **Panevėžys**, where are situated the biggest Lithuanian milling concerns, also a meat-canning factory of the „Maistas" Company and a large enterprise of the flax treatment industry; **Marijampolė**, with the first sugar factory founded in 1931 and several sawmills; **Plungė** and **Telšiai**, with two of the largest Lithuanian linen factories; **Tauragė**, with a meat wares factory of „Maistas"; **Rokiškis**, with a textile factory (wool weaving) and several dairy-farms; lastly, **Vilkaviškis**, which harbours a third of the Lithuanian underclothing manufacture, an enterprise for fur dressing and the largest bristle treatment concern.

4. The Rôle of the Joint-stock Companies

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The development of the joint-stock capital invested in industry has proceeded as follows:

Year	Total No. of jointstock Cos.	Share-capital in 1000 litas	Proportion of Foreign Capital
1928	56	69 059	7 600*)
1929	57	70 434	7 400*)
1930	62	85 851	19 400*)

*) Without Memel.

B. SPECIAL PART

1. The Foodstuffs and Luxury Goods Industry

a. The Structure of the most important Branches

● 433 252 The foodstuffs and luxury goods industry forms the strongest industrial branch of Lithuania. To it in 1937 pertained 28.3% of the total number of concerns (employing 5 or more); 16.5% of the employed workers; 18.3% of the engine horsepower; 41.6% of the gross production value; and 30.6% of the net value of the total Lithuanian industrial output.

The following table illustrates the development of the most important branches during the last ten years:

Special Branches	1927 m.		1931 m.			1937 m.		
	No. of Concerns	No. of Workers	No. of Concerns	No. of Workers	Capacity of Engines in H. P.	No. of Concerns	No. of Workers	Capacity of Engines in H. P.
Mills	83	778	70	583	4 965	89	713	8 013
Sugar factories	—	—	1	361	3 537	2	1 294	6 820
Sugar wares production	40	760	42	796	686	32	623	800
Meat and canned goods production	20	362	21	620	1 212	22	1 806	3 035
Dairy-farms	4	26	27	129	·	110	438	·
Spirit distilleries	26	284	31	298	1 113	38	283	·
Beer breweries	10	350	9	333	984	11	394	·
Tobacco and cigarettes	12	734	10	733	275	9	594	350

On the basis of the foregoing data, we may arrive at the following conclusions with regard to the development tendency of separate special branches:

1. The milling industry showed in 1931, in comparison with 1927, a decline in the number of concerns and their staffs, but in recent years a recovery and an advance ensued. This phenomenon related, however, only to the medium and wholesale concerns appearing in our table, which employ at least five persons. Precisely in the milling industry the small concerns are in an overwhelming majority, and these show quite another development tendency. On the basis of the statistics of the trade licences, we may conclude that the total number of all milling concerns, which in 1928 amounted to 1 334, by 1932 had risen to 1 472, but since then until 1937 a reduction of 1 402 has ensued. It is obvious from the foregoing that the reduction in the number of larger milling undertakings until 1931 was due to the process of decentralization, while, on the other hand, in recent years the concentration tendency, combined with more intensive mechanization, has been in the ascendant.

2. The creation of the sugar industry followed in 1931, when with the participation of the Government the joint-stock company „Lietuvos Cukrus" was established. The first sugar factory was then put in operation at Marijampolė, and in 1935 the opening of a second factory at Pavenčiai ensued.

3. The sugar wares and chocolate industry since 1931 has shown a decline in the number of concerns and of employed workers; but the undermentioned production figures, which reveal constant growth, prove that this phenomenon is solely attributable to centralization and mechanization.

4. The number of concerns of the meat industry is stationary. Its growth is, however, illustrated by the quintupling of the number of employed workers which has taken place since 1927. The joint-stock company „Maistas", to whose capital the Government contributes 7 000 000 litas, assumes a monopoly position. It was founded in 1923, but its activity on a wider scale began in 1930. „Maistas" owns to-day five factories, i. e. at Kaunas, Memel, Šiauliai, Panevėžys, and Tauragė. In each factory the manufacture of bacon takes first place, but sausage wares and ham are also prepared. The concerns at Kaunas and Panevėžys produce also canned goods, that at Kaunas also insu-

259 433 472 lin. Preserving cans are repaired in its own workshops. Moreover, at Kaunas a modern abattoir of „Maistas" has been built for municipal requirements. (The rôle of „Maistas" in our trade is described in the section „Share-capital in Lithuanian Trade").

234 433 5. The dairy-farms show an exemplary growth tempo. The development of Lithuanian butter production is due to the Central Union of Dairy-farming Cooperatives „Pienocentras", concerning whose activity a more detailed report is given in the subsequent section „The Rôle of the Cooperative Societies". The figures contained in the foregoing tables relate moreover only to the larger concerns; the total number of all dairy-farms of the dairy cooperatives included in the production statistics amounted in 1937 to 188.

274 433 6. The number of workers employed in the spirit distilleries remained stationary during the period 1927—1937, whereas the number of concerns rose from 26 to 38.

[464] 7. The development of beer breweries showed no material changes from 1927 to 1931. The number of employed workers since the curtailment between 1932 and 1936 for the first time in 1937 exceeded the figures for 1927.

277 433 8. The number of tobacco and cigarette factories and their staffs has decreased since 1931, which was occasioned chiefly by the decline of consumption during the time of crisis.

From the standpoint of the number of undertakings, the mills and dairy-farms constitute the two strongest groups of the foodstuffs industry. According to the number of employed workers, the meat and canned goods industry and the sugar industry head the list, although it must be borne in mind that as regards the last-named, the production campaign lasts only a few months.

b. The Development of Production

433 The total value of the gross production of the foodstuffs and luxury goods industry in 1937 amounted to 178 300 000 litas and the net production to 50 400 000.

These figures are distributed among separate branches as follows (in 1 000 litas):

Special Branches	1936 Gross Production Value	1936 Share in %	1937 Gross Production Value	1937 Share in %	1937 Value of Raw Material Fuel Consumed Domestic	1937 Value of Raw Material Fuel Consumed Foreign	1937 Net Production Value	1937 Share in %
Mills	18 949	11.4	22 593	12.7	18 431	965	4 196	8.3
Sugar Factories	14 007	8.7	14 301	8.0	8 891	625	4 785	9.5
Sugar Wares	5 860	3.6	6 388	3.6	2 108	1 371	2 909	5.8
Meat and Canned Goods	49 672	30.6	48 580	27.3	34 080*)	519	13 981	27.7
Dairy Farms	44 805	27.8	51 506	28.9	40 865	1 219	9 392	18.6
Spirit Distilleries	3 664	2.3	5 279	2.9	1 886	322	3 071	6.1
Beer Breweries	4 035	2.5	6 602	3.6	952	898	4 752	9.4
Tobacco and Cigarettes	9 239	5.7	9 717	5.5	740	4 663	4 314	8.5

On the strength of the foregoing data, we may conclude that the production values of all special branches of the foodstuffs industry, with the exception of the meat industry, rose in 1937 in comparison with the previous year. The percentage shares of separate branches have also correspondingly shifted. Whereas in 1936 the highest percentage share accrued to the gross production value of the meat industry, in 1937 it fell to dairy-farming. According to net production value, however, the meat industry in 1937 also remained in the first place because the raw material share for butter output constituted almost 80%.

The production index of the foodstuffs and luxury goods industry, calculated on the basis of production value in the previous chapter (excluding price fluctuations), when converted to the basis year 1931, affords the following figure series:

1931	1932	1934	1935	1936	1937
100.0	116.5	97.1	104.3	130.4	134.1

The foodstuffs and luxury goods industry evinces, in comparison with 1931, the smallest production growth.

The grounds of this development, differing from the other industrial branches, have already been mentioned in the previous

*) Value of the consumed raw material has been estimated at 70% of the gross value.

433 chapter. In the following table are given the data on the production quantities of the most important branches; they fully confirm the accuracy of the development tendency expressed by the index figures.

Production Figures in Tons

	1931	1932	1933	1934	1935	1936	1937
Wheat and Rye Flour	57 465	54 963	.	48 294	50 576	53 858	48 867
Sugar	6 613	16 191	8 166	15 263	22 136	27 164	28 673
Sugar Wares	.	.	.	1 387	1 484	1 626	1 934
Bacon	19 894	26 869	21 376*)	12 675*)	8 809	10 539	10 153
Other Meat Products	9 770*)	7 660	7 642*)	9 000**)	16 485	16 933	12 858
Butter***)	8 141	10 289	9 854	10 728	13 190	15 835	16 994
Spirits (1000 litres)	3 315	3 016	3 070	2 717	2 723	2 942	5 502
Beer (1000 litres)	11 264	7 194	7 292	6 274	5 284	7 290	14 165
Tobacco (consumed raw tobacco)	983	867	763	697	665	768	769

256 433 The fluctuations in flour production are naturally connected with the condition of the harvest. The falling-off in production in 1937 was caused by the serious deterioration of the harvest in 1936 in comparison with both preceding years.

257 433 The youthful sugar industry which, as mentioned above, was first established in the autumn of 1931, had developed its activity to the full only by 1932, and thereby, concurrently with bacon production, brought about the rise of the index, notwithstanding the general crisis, by 16.5 points. After the fluctuations in 1933 and 1934, and in connexion with the opening of a second factory in 1935, our sugar production rose greatly in 1935 and 1936 and to-day, as is clear from the definite curtailment of imports shown in the chapter on foreign trade, fully covers the demand of the domestic market. This also explains the slackening of the further growth in 1937.

439 253 234 The fluctuations and the recession of meat production which together with butter production belongs generally to the strongest export branches of Lithuanian economy, while the remaining branches mentioned above serve only the home market, are due to the import quotas and the preference policy of Great Britain, the most important export market for our meat products, vis-à-vis her Dominions. More detailed information 000

*) Export quantity. In the case of bacon on an average 95% of the production is for export.

**) Estimated.

***) Production of the dairy cooperative societies.

on this subject is contained in the section on the trade turnover of the „Maistas" joint-stock company.

The butter production figures specified in the foregoing tables relate only to the quantities supplied by the dairy cooperatives, which are used almost exclusively for export. Nearly the entire domestic demand is covered by the home production of the farmers (the so-called country butter) which it is difficult to judge by statistics. The supply of export butter shows constant growth. In 1937 it doubled in round figures in comparison with 1931, which must be ascribed to the fact that it has held its ground on the world market better than bacon.

Spirit, beer, and tobacco production greatly receded during the crisis. The last two years brought about, in connexion with the general economic revival, a new upward trend; while of course the doubling of beer production in 1937 is to be attributed to the reduction of the price in consequence of the lowering of the excise, and that of spirit supply in part to its compulsory admixture with petrol („Motorin").

2. The Textile Industry

The textile industry is the second most important industrial branch of Lithuania. It employs the largest number of workers (in 1937, 20.7% of all industrial workers of Lithuania accrued to it); its share in the aggregate engine horse-power amounts to 9.3% and its share in the production value of all Lithuanian industry to over 14% (gross value, 14.9%; net value, 14.3%).

In the pre-war Lithuania, only approximately 300 workers were employed in this industrial branch. The development of textile undertakings since 1927 is shown by the following comparison:

	1927		1931			1938 (Jan)		1937 (July)
	No. of Concerns	No. of Workers	No. of Concerns	No. of Workers	Capacity of Engines in H. P.	No. of Concerns	No. of Workers	Capacity of Engines in H. P.
Total	55	1 403	60	2 287	2 475	79	7 162	11 673
Including								
Flax Treatment	16	468	10	374	607	10	1 201	1 845
Linen Weaving	3	112	3	200		5	728	
Others								
Textile Industry	36	823	47	1 710	1 868	64	5 233	9 828

288 433 This table discloses that all branches of the textile industry have appreciably grown since 1927; that the textile industry proper (weaving and spinning) has, however, made much greater progress than flax manufacture. This is explained by the dependence of the latter upon export, whereas the other branches serve only the home market.

Already in the previous chapter it was pointed out that the output of the textile industry since 1929 has shown an unbroken advance, and of all industrial branches of Lithuania has increased the most vigorously. For the sake of comparison with the quantities data, the production index, calculated on the basis of **ad valorem** amounts, is once more quoted as converted to the basis year 1931:

1931	1932	1934	1935	1936	1937
100.0	108.1	168.4	178.4	264.0	311.2

248 288 433 The statistical data on the production quantities of separate special branches are as follows:

	1931	1932	1934	1935	1936	1937
Flax and Tow (in tons)	4 550	5 509	1 335	4 331	5 207	5 857
Linen Yarns (in tons)	8.5	44.6	41.6	62.8	91.9	173.8
Cotton Yarns (in tons)	344.1	249.1	391.7	337.9	433.5	973.9
Woollen and Half-Woollen Fabrics (in 1000 metres)	838.8	722	1 335.3	1 384.4	2 466.1	2 411.1
Cotton Fabrics (in 1000 metres)	5 282.4	7 200	11 537.9	12 079.2	14 531.3	15 578.8
Silk Fabrics (in 1000 metres)	61.2	100.1	538.4	771.7	1 139.8	1 240.8

248 439 In regard to the flax manufacturing industry, it is interesting to compare the foregoing production quantities of machine-manufactured flax and tow with the total quantities of our flax exports in the relevant years. These are as follows (in tons):

1931	1932	1934	1935	1936	1937
7 710	8 989	10 187	10 427	19 677	16 087

From this comparison it can be seen that the machine-manufactured flax to-day constitutes only a small part of the total exported quantity, i. e. that flax manufactured by the farmers forms the greatest portion. Nevertheless the industrial production shows a relatively more stable course (with the exception of 1934) than the rural supply. 248 433

The production of the textile industry proper has since 1931 on an average quadrupled. A much more powerful development therein is shown by silk-weaving, which in 1937 produced in round figures twenty times as many silk fabrics as in 1931, owing to the fact that it forms the youngest branch of our textile industry and was founded exactly in 1931. 288 433

The growth of the textile industry was undoubtedly promoted by the tariff policy (increase of the Customs duty on cotton fabrics in October, 1931, and again in April, 1932, on woollen and cotton fabrics) as also by the licence system (the import of woollen fabrics has been subject to licence since the introduction of the licence system, i. e. since December, 1932; that of cotton and silk yarns since August, 1934). This found expression in the sharp decline in 1932 of the imports of ready-made fabrics by half in round figures of the earlier imported quantity. The textile industry undoubtedly represents, concurrently with the production of knitted goods, the Lithuanian industrial branch best protected by tariff policy, which also explains its rapid growth and the concentration of large-scale undertakings in this branch. Notwithstanding this indisputable fact, it must none the less be recognized that, on the one hand, tariff protection is not equally apportioned (thus, for example, the duties on silk fabrics actually on an average amount to approximately 200% **ad valorem**; on cotton fabrics over 60%; and on linen fabrics only 25%), and that, on the other hand, the high duties on yarns (especially on artificial silk yarn) partially equalize the advantage of the high duties on ready-made fabrics. 439 651

3. The Timber Industry

To the timber industry, which may be designated the third most important industrial branch of Lithuania, accrued in 1937 16.9% of all the workers employed in the medium and wholesale manufacturing industry; 10.5% of the engine horse-power; 313 433

313 9.1% of the gross value, and 9.0% of the net value of the aggre-
● 432 gate industrial production.

The development of the timber industry since 1927 is shown by the following table:

	1927		1931			1937		
	No. of Concerns	No. of Workers	No. of Concerns	No. of Workers	Capacity of Engines in H. P.	No. of Concerns	No. of Workers	Capacity of Engines in H. P.
Total	185	3 446	193	4 308	10 676	219	5 346	13 186
Including:								
Plywood production	•	•	3	473	9 812	3	846	11 861
Sawmills	131	2 731	118	2 741		139	3 548	
Cabinet-makers	43	488	60	786	864	64	658	1 325
Other Branches	11	227	12	308		13	294	

It will be seen from the foregoing that the strongest group of the timber industry is formed by the sawmills. Its lower position until 1936 compared with the pre-war period is due to the loss of round timber formerly drawn from the Vilna region.
[464] The vigorous growth of its staff ensued for the first time in 1937. In 1936 the number of workers employed in the sawmills still amounted to only 2 712, a position therefore below the level of 1931. The impetus to the expansion of this branch was given by the greatly increased prices for sawn timber in 1937. The plywood industry, which like the sawmills works for export, had in 1929 already reached the peak of employed workers (851). For the first time in 1937 could the staff be brought again to the same position. The remaining branches, among them the most important, cabinet-making, judged by the dimensions of their staffs, grew only until 1931, and remain, notwithstanding the partial retrieval of the crisis losses, still below the position of that year.

Owing to the exceedingly large share of the special branches of the timber industry working for export, the contingent course of their production has been influenced to a greater degree and more rapidly by the world economic crisis than was the case with other industrial branches. The production index already cited in the previous chapter shows that the timber industry even in 1930 had suffered a setback, and for the first

time in 1934 surpassed the position of 1929. The following index figures, converted to 1931, show indeed constant growth: 313 433

1931	1932	1934	1935	1936	1937
100.0	105.3	148.5	163.9	183.5	208.0

The data on production quantities are as follows (in 1000 cubic metres):

	1931	1932	1934	1935	1936	1937
Sawn timber	256.5	280.6	304.2	294.7	282.8	335.7
Plywood	5.9	4.7	9.9	9.8	10.0	12.4
Match straws (in tons)	.	.	2 246	2 269	2 322	2 614

It will be seen from these figures that the development of separate production branches does not proceed uniformly. The recovery of sawn timber (this refers chiefly to the working-up of Russian round timber which since 1930 has been imported through the Memel Timber Syndicate) showed from 1932 to 1936 no great changes. For the first time the growth of production quantity in 1937 was able to exceed the position of 1931 by 30%. The plywood supply in 1937 doubled in comparison with 1931. It must, however, be noted in this context that the high position of 1929 (12 425 cubic metres), although caught up, could not be exceeded. The biggest advance is shown by the production of match straws. Its estimated amount in 1931 and 1932 was approximately 1 000 tons, and since then has increased more than two and a half times, i. e. thanks to the expanded export to the United Kingdom and the Dominions (Australia) since 1934. There are no quantity data available in respect of the remaining production branches of the timber industry. The above cited index figures reckoned on the basis of the production value and taking price changes into consideration show that on an average the scope of production of our timber industry has doubled since 1931, but that nevertheless its growth in comparison with 1929 amounts to only 75%.

4. The Paper and Polygraphic Industry.

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From the standpoint of importance of its rôle in Lithuanian industrial economy, the paper and polygraphic industry stands in the fourth place. In 1937 there accrued to it 8.1% of all industrial workers; 18.1% of the engine horse-power; 8.4% of the gross value; and 10.8% of the net value of Lithuania's industrial production. According to net production value it ranked correspondingly before the timber industry in the third place. Its development since 1927 is illustrated by the following comparison:

	1927		1931			1937		
	No. of Concerns	No. of Workers	No. of Concerns	No. of Workers	Capacity of Engines in H. P.	No. of Concerns	No. of Workers	Capacity of Engines in H. P.
Total	52	2 115	61	2 157	8 777	76	2 559	22 602
Including:								
Cellulose and Paper	5	1 133	4	829	8 143	4	1 180	21 675
Paper and Cardboard Wares	9	284	15	365	145	18	371*)	128
Printing Offices and Book-binderies	38	698	42	903	489	54	1 100	799

Already in an earlier chapter it was pointed out that the paper industry belongs to those branches that have grown least since 1929. The index cited therein shows that the paper industry suffered the greatest setback in the crisis years (in 1932 by 32.3%) and in 1937 exceeded its position of 1929 by only 48.8%.

The explanation given in the previous section for the retrogression of timber production holds good also for the [439] paper industry. The cause of the severe recession of the production index of the paper industry in the crisis years lies in the then curtailment of cellulose export (from 60 781 tons in 1929 to 39 384 tons in 1932) and in the high percentage share of cellulose supplies in the aggregate production of the paper

*) Figures for January, 1938, because the July figures do not reflect the complete employment position.

and polygraphic industry which, measured by gross value, in 1937 amounted to 42%, and in 1932, when the paper production proper still hardly existed, to still more.

In a calculation converted to the basis year 1931, the production index figures for the paper and polygraphic industry are as follows:

1931	1932	1934	1935	1936	1937
100.0	80.9	122.1	124.5	149.4	177.9

The following statement shows the production quantity figures in tons ascertained for the same years:

	1931	1932	1934	1935	1936	1937
Cellulose	39 300	36 800	56 093	53 957	59 208	66 101
Paper	2 800	2 400	6 214	6 921	7 407	8 922
Cardboard	·	830	681	848	1 047	943

On the strength of these data we may conclude that the cellulose production since 1931 has risen approximately 70%, but has exceeded the position of 1929 by approximately only 10%. The rise in the total production of the paper industry by 77.9% since 1931 is due to the growth of paper production which, as a result of the erection of a paper factory at Petrašiūnai in 1933, has since then more than trebled. Thanks thereto our paper imports since 1933 have receded by two-thirds in round figures.

The index figures calculated on the basis of the value amounts naturally reflect also the development of the remaining branches, for which no quantity data are available. This relates in the first place to the printing business, which has vigorously developed in independent Lithuania (the establishment of over 30 new printing offices in the first years of independence), the output of which, however, during the crisis years suffered a setback, which, especially in 1934 and 1935, exerted a restraining influence on the course of the index curve.

5. The Clothing and Footwear Industry.

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● 433 The clothing and footwear industry shows in recent years, among all Lithuanian industrial branches, after the textile industry, the most vigorous growth. Its production in 1937 more than quadrupled in comparison with 1929. To this industrial branch in the past year pertained 8.6% of the industrial workers; 5.3% of the gross value; and 6.9% of the net value of Lithuania's industrial output, whereas its share in the aggregate engine horse-power amounted only to 0.7%. The clothing and footwear industry has therefore the weakest degree of mechanization of all industrial branches of Lithuania.

Its structural development since 1927 is shown in the following table:

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	1927		1931			1937		
	No. of Concerns	No. of Workers	No. of Concerns	No. of Workers	Capacity of Engines in H. P.	No. of Concerns	No. of Workers	Capacity of Engines in H. P.
Total	139	1 607	157	1 994	482	157	2 707	832
Including:								
Output of Woven Goods	20	328	31	669	143	42	1 158	348
Footwear Industry	53	737	43	629	185	48	782	277
Underwear and other Branches	66	542	83	696	114	67	767	207

On the basis of these data one may conclude that while the footwear industry ten years ago represented the leading branch, to-day the woven goods supply (hosiery and knitted wares) heads the list. The number of undertakings of this special branch has doubled since 1927, and the number of its staff almost quadrupled. The total number of workers employed in the production of underwear and in the tailoring and hat industry has since 1927 risen by 43%; and that of the staffs of the footwear industry during the same period only 6%. It would, however, be a mistake to draw therefrom conclusions concerning the development of the scope of production of the two groups. Footwear output, thanks to the construction of its own factories, has grown more vigorously than that of underwear.

Quantity data for the period under review are available only for leather footwear output; they give the following series (in 1000 pairs): 295 433

1931	1932	1934	1935	1936	1937
260.4	220.6	270.4	337.2	361.5	532.2

These figures show that footwear production has doubled in round figures since 1931. If, however, we take into consideration the improvement of quality and the introduction of new classes, we may estimate the growth of production at approximately two and a half times, which also the development of the value amounts cited below attests.

Since there are no quantity data available for woven goods production and underwear supply (with the exception of 1937), we must content ourselves with value amounts for the sake of comparison of the development of separate branches of the clothing and footwear industry. Expressed in the prices of 1929, on the basis of the price indices of the Lietuvos Bankas Bulletin for woven goods and of the Central Statistical Bureau for boots and shoes, the following figures (in 1000 litas) afford the relevant production data:

	1931	1932	1934	1935	1936	1937
Woven goods	7 217	7 952	11 633	13 374	17 388	20 956
Footwear	6 204	5 080	7 054	9 108	11 660	15 079
Underwear, etc.	2 742	2 529	3 507	3 764	4 271	5 404

These data show:

(a) That the woven goods output also was not checked in its advance during the crisis years and reveals the most vigorous growth, i. e. in 1937 by 190.4% in comparison with 1931;

(b) That the footwear production and the underwear output in 1932 suffered a setback, and that the production growth of the former during the period under review amounted to 143.0% and of the latter to 97.1%.

The average production index of the clothing and footwear industry (appraised according to gross values) adapted to the basis year 1931, gives the following figures:

1931	1932	1934	1935	1936	1937
100.0	96.3	137.3	162.4	206.2	256.4

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The development of the woven goods and footwear industry was successfully promoted by the tariff policy, i. e. especially by the Laws of October 1931 and August 1934. The woven goods production to-day entirely covers the demand of the home market, and on that account also the imports of foreign goods, which in 1928 still represented 173.3 tons, by 1937 had sunk to only 7.3 tons. The imports of leather footwear, thanks to the consolidation of native production, have also declined, although not by a long way to the same extent. In 1928, they amounted to 36.1 tons; in 1937, on the other hand, to 19.4 tons.

4. The Metal and Machinery Industry.

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The number of workers employed in the metal and machinery industry in 1937 amounted to 2 792 or 8.8% of all the industrial workers of Lithuania. Its share in relation to the total of the engine horse-power amounted to 3.7%; its share in relation to the gross production value to 5.2%; and in relation to the net production value to 6.4%. This industrial branch was in the pre-war Lithuania more highly developed than to-day. In 1913, in the present political territory of Lithuania approximately 4 000 workers were employed in the metal industry. The diminution of the scope of production is due to the curtailment of the outlet for export goods. Nevertheless, during the last two years one can again discern a rapid development tempo.

The comparative figures on the changes in structure since 1927 are shown as follows:

	1927		1931			1937		
	No. of Concerns	No. of Workers	No. of Concerns	No. of Workers	Capacity of Engines in H. P.	No. of Concerns	No. of Workers	Capacity of Engines in H. P.
Total	94	1 895	95	1 863	3 134	103	2 792	4 677
Including.								
Metal Industry	11	547	20	665		32	1 190	
Machinery Industry and Means of Transport Production	16	528	19	722	2 781	14	1 059	4 271
Mechanical Workshops and Sheet Metal Supply	62	772	51	422		46	414	
Electro-Technical Concerns	5	48	5	34	353	10	109	406

. On the basis of these figures we may conclude that the growth of the staffs relates to the metal and machinery industrial undertakings managed on a factory scale, and to the electro-technical branches, while the more hand-managed locksmith's and tinsmith's workshops slowly but steadily declined. 392 433

The nomenclature of the products of the metal and machinery industry is extremely differentiated, for which reason comparative figures for the production quantities of separate articles are wanting. The most important items consist of nails, wire, zinc-plate, agricultural implements, and various building materials. Nearly a fifth of the ascertained production value of the metal and machinery industry accrues to the output and repair of means of transport (railway-waggons, motor chassis, and shipbuilding), among which, however, the principal rôle devolves upon the workshops of the State Railways. Comparative quantity data for the past years are available only for wire and nails and zinc-sheets; they are as follows (in tons): [397] [396]

	1931	1932	1934	1935	1936	1937
Wire & Nails	4 694	4 421	3 411	3 719	4 324	5 156
Zinc-sheets	·	·	409	495	672	558

The production index of the metal and machinery industry, ascertained on the basis of the ad valorem data and related to the basis year 1931, shows the following course:

1931	1932	1934	1935	1936	1937
100.0	90.8	95.3	100.2	151.9	162.7

The far more favourable development tendency of the index of total production of the metal and machinery industry than that of wire and nail production, alike in the crisis years and also in relation to the figures for 1937, points to the creation of new branches of production; for example, enamel and aluminium ware has been to a greater extent produced since 1934, &c.

7. The Chemical Industry.

381 To the chemical industry in 1937 accrued 4.3% of the industrial workers; 2.3% of the engine horse-power; 4.9% of the gross value; and 6.3% of the net value of Lithuania's industrial production. In pre-war Lithuania there were only two match factories and one fertilizer factory; other branches were almost non-existent. In independent Lithuania many new undertakings are springing up. The development of separate branches proceeds, however, unequally, as we can gather from the following data:

	1927		1931			1937		
	No. of Concerns	No. of Workers	No. of Concerns	No. of Workers	Capacity of Engines in H. P.	No. of Concerns	No. of Workers	Capacity of Engines in H. P.
Total	49	885	48	724	1 244	48	1 344	2 848
Including:								
Match Production	5	326	2	158	213	1	52	140
Soap Production	15	174	15	189	118	12	158	362
Rubber Goods	—	—	—	—		1	620	
Fertilizer Factories	2	109	1	130		1	141	
Colours, Turpentine and Technical Fats	7	69	10	66	913	14	151	2 346
Pharmaceutical and Cosmetic Production	4	30	6	47		9	98	

464 The sharpest decline in the number of undertakings and workers is shown by the match industry. The curtailment in 1931 to two concerns with 158 workers against five undertakings with 326 workers in 1927 may be ascribed to the creation in 1930 of the State Match Monopoly and the transfer of the same to the „Lietuvos degtukų akcinė bendrovė" (Lithuanian Joint-stock Match Company) founded with Swedish capital. The still lower position in 1937 was occasioned by the decrease in consumption, which in the analysis of production will be more closely discussed. The staffs of the soap factories show a slight reduction. The number of the workers employed in the Memel Fertilizer Factory has since 1931 only slightly increased.

increased. Against this, the number of concerns and of workers in the colours and technical fats industry since 1927 has doubled and in the production of pharmaceutical and cosmetic goods trebled. The establishment of a rubber goods factory in 1933 had, however, decisive importance, and to this nearly half of the workers employed in the chemical industry pertained. The second rubber goods factory, established at the end of 1937, was not yet working in the period under review.

The following quantity figures show the development of production of separate branches of the chemical industry for the period 1931—1937:

	1931	1932	1934	1935	1936	1937
Matches (in million boxes)	45.8	43.3	39.4	41.1	8.7	14.3
Washing soap and powder (in tons)	3 441	2 226	2 072	2 303	2 595	2 794
Toilet soap (in tons)	·	154	200	200	234	230
Rubber boots (in 1000 pairs)	—	—	772	313	786	986
Superphosphates (in tons)	43 400	37 000	47 100	31 605	18 713	42 972

As has already been explained above, the cutting down of match production has been caused by the decline in consumption during the crisis years. The statistics of sale of matches prove this in a clearer manner. There have been sold (in million boxes):

1931	1932	1933	1934	1935	1936	1937
45.9	42.4	39.4	33.8	26.9	26.9	27.1

The output of washing-soap, which shrank appreciably during the crisis years, has not yet regained the pre-crisis position in spite of recovery during the last three years. The production of toilet-soap shows a better course. The production of artificial fertilizers proceeds irregularly, and its progress does not coincide with the contingent economic development. A sharply upward tendency is seen in the production of the youthful rubber industry. The recession in 1935 was evoked by technical difficulties of the inception period.

In order to be able to form a general idea of the production development of the chemical industry, we must utilize the value

381 433 amounts. The production index of the chemical industry, calculated in this manner and already cited in the previous chapter, shows, converted to the standard of the basis year 1931, the following course:

1931	1932	1934	1935	1936	1937
100.0	93.6	146.2	131.0	146.3	171.0

The recession in 1932 was induced chiefly by the decline of soap and fertilizer production. The jump in 1934 was prompted by the foundation of the rubber goods factory in the preceding year. The setback in 1935 was caused by the repeated shrinkage of fertilizer production and the transitory stagnation of rubber goods production.

8. The Leather and Hide Industry.

282 433 464 In the leather and hide industry in 1937, 1 096 workers or 3.5% of the total number of industrial workers were employed. Its percentage share in the volume of engine horse-power amounted to 1.8%; the share in gross production value 4.3%; and in net value of the industrial production of Lithuania, 2.2%. The lower net value rate is due to the high raw material share.

In pre-war Lithuania the leather industry employed nearly 1 500 workers. The present position is therefore, notwithstanding the growth during recent years, still below the pre-war level. On the other hand, more collateral branches are springing up which did not formerly exist, such as fur manufacture, leather ware production, and the bristle industry. Structural variations since 1927 are illustrated in the following comparison:

	1927		1931			1937		
	No. of Concerns	No. of Workers	No. of Concerns	No. of Workers	Capacity of Engines in H. P.	No. of Concerns	No. of Workers	Capacity of Engines in H. P.
Total	40	657	36	693	2 617	51	1 096	2 313
Including: Leather Output	26	538	22	555	·	22	751	·
Leather Ware Production	1	6	5	29	·	11	78	·
Fur Manufacture	1	5	—	—	—	4	107	·
Bristle Industry	4	43	6	53	·	9	112	·

The leather industry is the sole industrial branch of Lithuania in which mechanization not only has made no progress but the capacity of whose engine horse-power has even declined. The foregoing table likewise shows that the number of undertakings in leather production since 1927 has decreased and since 1931 has remained stationary. Its staffs have, however, increased by 40%. The remaining branches reveal a rapid development tempo, especially fur manufacture.

Comparative production figures, i. e. both quantity and value data, are available only in a more restricted sense for the leather industry. Since, however, more than 80% of the total production value of this industrial branch accrues to it, the somewhat more animated development of newly-created collateral branches cannot substantially influence the general contingent outlook.

The quantity data on the recovery of the most important kinds of leather since 1931 are collated in the following table:

	1931	1932	1934	1935	1936	1937
Sole Leather (in tons)	998	703	1 154	957	1 125	1 366
Chrome leather (in 1000 square feet)	2 149	3 093	2 476	3 443	3 907	4 454
Russia Leather (in tons)	290	264	159	166	319	339
Inner sole Leather (in tons)	225	186	128	217	226	224

The average production index of the leather industry, calculated with regard to the remaining less important kinds of leather, and appraised in accordance with the gross value coefficient, gives the following figures (basis year 1931):

1931	1932	1934	1935	1936	1937
100.0	80.5	91.6	104.9	141.3	193.3

Sole leather and chrome leather play the most representative rôle, their coefficients on an average constituting 80% of the total value amount of leather production. The somewhat divergent course of the production curve of both these leading

282 classes from 1931 to 1935 has partially been reciprocally compensated, which is also expressed in the index figures. The doubling of the scope of production in recent years has also led to a considerable decline of leather imports (in 1933, 59 tons, in 1937, 18 tons), in which connexion a prominent rôle has also been played by tariff policy and import licensing.

9. Electricity Works.

377 In connexion with the constantly progressing mechanization of industrial concerns, whereby, as was shown in the General Part, the use particularly of electric engines has intensively increased (by 149.4% since 1931), the supply of electric energy, together with the textile industry, is the sole industrial branch of Lithuania whose production ascent since 1929 has suffered no recession even in the crisis years. In 1937, there pertained to these branches (in which also gas supply - Memel - managed by the municipalities, and the exploitation of waterworks are included) 1.6% of the industrial workers; 30.8% of the engine horse-power; 4.0% of the gross production value; and 9.1% of the net value of Lithuanian industrial production. The far higher net value rate is affected by the share of raw material deductions.

The structural development of this branch since 1927 is shown by the following comparative figures:

1927		1931		
No. of Concerns	No. of Workers	No. of Concerns	No. of Workers	Capacity of Engines in H.P.
29	648	30	480	22 799

1937		
No. of Concerns	No. of Workers	Capacity of Engines in H.P.
32	523	38 511

377 The data of the production statistics on the energy sold in million kilowatt - hours show the following development of our electric current supply since 1931:

	1931	1932	1934	1935	1936	1937
In Millions of kWh	18.7	18.8	22.3	25.7	28.4	35.6
In 1 000 Litas	12 500	11 880	11 310	12 068	12 851	15 172

The following indices are calculated on the basis of the foregoing data:

	1931	1932	1934	1935	1936	1937
Production Index	100.0	100.5	119.3	137.4	151.9	190.4
Price Index	100.0	94.0	76.1	70.1	67.2	64.2

If we compare the course of this price index with the price-index of industrial raw material and produce of the Lietuvos Bankas Bulletin (vide the chapter on „Home Trade"), we must recognize that the prices of current in 1932 were maintained disproportionately high; that in 1937, on the other hand, the average price in comparison with the previous year, contrary to the general price tendency, abated only negligibly. In the interest, indeed, of mechanization of the industry, a further price reduction would be desirable.

10. The Stone and Earth Industry.

A relatively higher percentage share of the employed industrial workers is apportioned to the stone and earth industry, the most important branches of which consist of brick and glass production. This in 1937 amounted to 2 827 or 9.0%, in which context, however, one must bear in mind that these figures relate only to the summer months, because in winter the brick-kilns are not working. The share in respect of the aggregate engine horse-power was far lower, viz., 3.1%, and the share in respect of the gross production value 2.0% and net 3.7%, which signifies a marked improvement.

This industrial branch in the pre-war Lithuania employed approximately 700 workers. It developed vigorously in independent Lithuania and has during the past decade more than doubled both the number of the staff and the scope of production.

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The structural development since 1927 will be clear from the following table:

	1927		1931			1937		
	No. of Concerns	No. of Workers	No. of Concerns	No. of Workers	Capacity of Engines in H. P.	No. of Concerns	No. of Workers	Capacity of Engines in H. P
Total	94	1 357	104	2 160	2 206	99	2 827	3 826
Brick Production	69	970	74	1 703	2 139	73	2 082	2 924
Glass Production	6	2 077	5	248	67	5	349	902
Other Branches	19	180	25	209		11	396	

It must moreover be observed that during the years 1932—1936 the number of workers suffered a severe recession, and that the position of 1931 was for the first time in 1937 overtaken and surpassed.

The production statistics show the following quantity data:

	1931	1932	1934	1935	1936	1937
Brick production (in Millions)	54.4	45.3	42.6	42.2	47.7	60.7
Bottles (in 1 000)	·	2 760	3 780	3 883	4 776	6 762

It is clear from the foregoing that brick output was severely restricted by the crisis and that the upward trend of 1937 exceeds the position of 1931 by only 12%. A far more favourable development is shown by bottle production, which in 1937 was two and a half times as large as in 1932.

The production index of the stone and earth industry, which expresses the average development tendency of separate branches, proceeded as follows (converted to the basis year 1931):

1931	1932	1934	1935	1936	1937
100.0	92.3	105.2	101.5	124.4	153.8

On the strength of these figures, we may conclude that, on the striking of a balance of production of the total industrial branches, the losses of brick production through the advance of the glass industry were already in 1934 more than compensated. Also the final figures, which signify a growth of 53.8% since 1931, are for the most part to be credited to the account of the glass industry.

11. Peat - cutting.

Peat-cutting forms the weakest industrial branch of Lithuania. In 1937 it employed 2.0% of the industrial workers and disposed of over 1.4% of the engine horse-power. Its production value amounted to only 0.3% of the gross value and 0.7% of the net value of the total industrial production. Its development during the last decade is illustrated by the following statistical data:

1927		1931		
No. of Concerns	No. of Workers	No. of Concerns	No. of Workers	Capacity of Engines in H.P.
7	603	4	490	612

1937		
No. of Concerns	No. of Workers	Capacity of Engines in H.P.
11	629	1 681

Production.

	1931	1932	1934	1935	1936	1937
In tons	22 799	25 285	24 111	32 614	49 059	57 200
Index:	100.0	111.3	105.7	143.0	215.2	250.9

We see from these figures that the growth of production since 1931 by 150.9% was caused chiefly by the mechanization of cutting, because the number of workers in that time has risen by only 28.4%.

In view of the fact that Lithuania must derive coal from abroad, and that the resources of the peat strata are estimated at 230 000 000 tons, peat-cutting is assured a further advance, the more so that the use of this fuel has been adopted already in more industrial concerns (the sugar factories, for example).

6: Anonymous U-4, 5 (no date) 1938 RB5 Lithuanians RB5

APPENDIX

ECONOMIC FIGURES

	1929	1930
INDUSTRY:		
1. Total number of medium and wholesale undertakings (of 5 employed persons upwards)	1 044	1 051
2. Total number of employed workers	19 637	19 334
3. Total figure of engine power in H. P.	.	.
4. Production Index	100.0	108.3
TRADE:		
1. Total number of larger undertakings (Trade in the narrower sense I — III Corp)	14 255	14 224
2. Railway goods traffic 1 000 tons	2 079	1 993
3. Price Index	100	87
4. Foreign Trade Turnover:		
(a) Million Litas	636.3	646.2
(b) Volume	100.0	116.7
5. Cooperative Trade Turnover, million litas	108.6	111.9
FINANCE AND CREDIT CONDITIONS:		
1. Monetary circulation, in million litas	102.3	117.2
2. State Revenue, in million litas	338.5	347.7
3. State Expenditure, in million litas	269.9	320.6
4. Deposits of the Credit Institutions, in million litas	282.8	345.7
5. Loans of the Credit Institutions, in million litas	333.0	437.8
6. Total Sums of Bills of Exchange Protests, in million litas	49.1	40.1
7. Discount Rate of the Lietuvos Bankas	7	7

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1931	1932	1933	1934	1935	1936	1937	
							433
1 049	1 105	1 108	1 118	1 136	1 135	1 247	
21 053	19 743	20 660	22 282	23 344	25 844	31 689	
70 038	84 804	95 751	94 585	105 349	109 634	125 157	
140.7	153.7		166.5	185.9	244.2	272.0	
							494
14 141	13 590	12 981	12 572	12 034	12 054	12 445	493
2 164	1 599	1 722	1 853	2 003	2 193	2 352	489
74	61	54	52	46	46	53	
551.1	356.1	302.4	285.9	280.8	346.5	420.9	
128.3	106.6	102.2	103.2	103.9	125.2	139.3	
127.8	111.3	105.8	111.3	149.4	185.2	203.6	
							452
127.1	112.7	105.8	101.1	111.4	124.1	131.9	452
340.1	292.0	256.9	264.4	279.9	302.8	329.9	453
335.3	278.2	249.7	251.8	276.9	287.7	318.2	
302.0	291.2	278.4	269.5	229.6	290.2	347.6	
479.6	449.5	446.5	461.9	451.5	467.3	501.4	
67.5	71.7	39.3	32.5	23.5	13.9	12.9	
8½	7	7	6	6	5½	5½	

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III. SOIL IMPROVEMENT AND AGRICULTURAL PROGRESS

641 The Ministry of Agriculture controls the organisation for the encouragement of technical progress in agriculture, the aim 242 of which is to improve the conditions of existence of the 433 agricultural classes. The Ministry is responsible for carrying out agrarian reform and agricultural improvements, schools of agriculture, the organisation and improvement of veterinary work and supervision of the export of agricultural produce, etc.

In addition to the Ministry, the Chamber of Agriculture (founded in 1927) is also active in agricultural development. It is in charge of all the forms of agricultural training not under the authority of the Ministry, including the agricultural intelligence service; it supervises and co-ordinates the activities of the stock-breeders' associations, the flax-growers' association, the sugar-beet-growers' association and other similar organisations; it also subsidises various agricultural organisations and individual agriculturists with a view to the promotion or improvement of some particular branch of agriculture, and organises agricultural shows, etc.

474 Working in conjunction with the Ministry of Agriculture are various central organisations concerned with the processing 242 of agricultural produce, and its marketing abroad and at home, 433 and with supplying to agriculturists all such goods as they may require. These organisations are : "Lietuvos Žemės Ūkio Kooperatyvų Sąjunga" ("Lithuanian Union of Agricultural Co-operative Societies"), abbreviated to "Lietūkis", "Centralinė Lietuvos Pieno Perdirbimo Bendrovių Sąjunga" ("Lithuanian Central Union of Dairymen's Co-operative Societies"), abbreviated to "Pienocentras", and the "Maistas" and "Lietuvos Cukrus" joint-stock companies.

The chief measures taken with a view to the improvement of agricultural production are the consolidation of holdings (see above), land drainage, the development of agricultural training (see under V) and agricultural research.

312 Systematic work on the drainage of agricultural land could not be begun until 1921. The Ministry of Agriculture is proceeding with the regularisation of the beds of streams and the cutting of dykes which enable agriculturists to drain waterlogged land completely by means of open ditches or drainage pipes. The total area of the land drained by means of dykes from 1921 to 1937 (inclusive) is approximately 416,000 hectares, or more than 10% of all the land used for agricultural purposes.

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As regards *agricultural research*, the Institute of Agricultural Research (founded in 1927) is in charge of experimental work in the field of agriculture throughout the country, with the exception of the work conducted by the Agricultural Academy at Dotnuva. It has at present under its control seven experimental stations dealing with various matters relating to the cultivation of crops, an experimental fruit-growing station (in process of organisation), a crop improvement station (at Dotnuva), a crop protection station (at Dotnuva) and a station for research on the breeding of pigs for bacon. Proposals are under consideration for the foundation of an agricultural machinery testing station and of stations for research into cattle- and sheep-breeding respectively.

In consequence of these measures, and particularly the activities of the agricultural intelligence service, agriculturists have begun to introduce a more rational system of crop rotation, to prepare the soil more carefully and fertilise it more rationally (the progress of stock-breeding increases the quantities of manure available), to use better quality seed, to improve meadow- and pasture-land, to make more extensive use of agricultural machinery (through the foundation of co-operative societies for the joint use of machinery), etc. The results have been a decrease in the area of land left fallow and a corresponding increase in the area sown from an average of 2,079,000 hectares for the years 1928 to 1930 to 2,312,000 hectares for the period 1935 to 1937, the increase chiefly affecting the land under the more intensively cultivated crops (wheat, sugar-beet, mangel-wurzels). There has also been an increase in the yield per hectare of all the principal crops (wheat, rye, barley, oats, peas and potatoes), the yield from 1933 to 1937 being almost half as great again as during the years 1901 to 1910. It is worthy of note that, whilst the cultivation of sugar-beet was entirely unknown in the country before the war, the refineries now pay out almost 6½ million litai to the growers each year. The productivity of meadow- and pasture-land has increased to an even greater extent than that of arable land.

This latter circumstance has permitted the development of stock-breeding and the number of farm animals has risen considerably (in the case of cattle, for example, from 766,000 in 1913 to 1,172,000 in 1937). As a result of the organisation of milk control societies, breeding centres, the keeping of stud books, etc., the productivity of stock has also increased very considerably.

Progress has been particularly noteworthy in the case of cattle (which, in Lithuania, are mainly bred for the production of milk). In 1923, with a view to the transformation of surplus milk into exportable produce, chiefly butter, dairymen's co-operative societies were founded with the financial support

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of the Government. Since then, the dairy industry and the manufacture of butter have made rapid progress. In 1937, the 193 dairymen's co-operative societies, all of which are equipped with the most up-to-date machinery, supplied 420 million kilogrammes of milk — including that delivered to the 2,052 cream-separating centres — and produced 16.9 million kilogrammes of butter. Though, since the war, the population has increased by some 300,000 inhabitants, the consumption of dairy products per head is at present greater than before the war, and butter exports, which were formerly negligible, amounted in 1924 to 524 metric tons and in 1936/37 to 15,000 tons approximately.

Hand in hand with the development of the dairy industries has gone the development of pig-breeding (skim-milk is used for the fattening of young pigs). Not only has the number of pigs considerably increased (from 450,000 in 1913 to 1,192,000 in 1937), but the quality of the pigs (for the manufacture of bacon) has greatly improved. With the Government's financial support, a bacon export industry has been rapidly built up. In 1928, bacon exports amounted to 150 metric tons; in 1932, to more than 25,000 metric tons, and, in 1936/37 (being affected by the introduction of bacon import quotas in England), to more than 10,000 metric tons. These figures, together with those for the export of live pigs (in 1932, 34,000, and, in 1936/37, 125,000 approximately) and the number of pigs kept are proof of the progress made.

Poultry-keeping also has made considerable headway; more pure-bred poultry are being raised, and feeding and poultry-keeping technique have become more efficient. Horse-breeding likewise has improved, thus facilitating the sale of Lithuanian horses in foreign markets.

Such are the methods whereby the Ministry of Agriculture, the Chamber of Agriculture and the organisations working in conjunction with the latter are striving to improve the production both of crops and live-stock and to foster agricultural industries (dairy industries and the manufacture of bacon). Since 1931, the Chamber of Agriculture has also been endeavouring, with the co-operation of the Union of Young Farmers' Clubs, to rationalise and modernise home industries (weaving, knitting, fur-dressing, felt-making, pottery, furniture, etc.) and to improve the artistic qualities of the articles produced. Products of the home industries are thus enabled to compete with factory-produced goods.